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## **Constructor-Investor Collaboration in the Early Phases of Real Estate Development**

Master's thesis submitted for examination for the degree of  
Master of Science in Technology

Helsinki, 7<sup>th</sup> of April 2019

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**Title of thesis** Constructor-Investor Collaboration in the Early Phases of Real Estate Development

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**Master programme** Real Estate Economics

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**Code** ENG24

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**Thesis supervisor** Professor Heidi Falkenbach

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**Thesis advisor** M.Sc. (Tech.) Minna Vierula

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**Date** 07.04.2019

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**Number of pages** 65 + 2

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**Language** English

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### Abstract

Along with the ageing building stock of Finland and the invariably changing society, periodic renovations become topical, new space requirements gain grounds and the demand for housing increases especially in growth centres. As a result, demand and supply of space do not meet, and a need to develop the existing buildings emerges. To enable functioning repair construction or development process, the constructor needs to know the objectives and the real estate strategy the investor has determined, and the investor needs the technological know-how and cost awareness the constructor has to offer.

There is a wide spectrum of literature regarding real estate development and its process, as well as collaboration in various perspectives. This research reaches novelty by observing the early phases of collaboration between a constructor and an investor in a residential real estate development project. The thesis observes the phase in which the constructor and the investor first initialise collaboration, define project objectives and decide on the course of collaboration from thereon. To refer to this phase, a term alternatives analysis is used.

The thesis uses the existing literature to give the required background information to understand the frameworks of where the observed collaboration occurs. The literature review includes the main stakeholders of the development projects, event-sequence models of the real estate development process and collaboration theory. The gained knowledge is exploited and deepened in the empirical research that uses in-depth semi-structured interviews of both investors and representatives of a construction company.

By comparing the literature and the interviews, the thesis describes the collaboration between a constructor and an investor in the alternatives analysis phase and lists challenges this collaboration has. The research indicates that trust is one of the most important factors when initialising a collaboration and that there is a need to improve communication in many levels, including the definition of own needs, taking an interest to the other party's perspective and having open attitudes in collaboration.

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**Keywords** Real Estate Development, Property Development, Collaboration, Investor, Constructor, Feasibility Analysis

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**Tekijä** Iina Ahonen

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**Työn nimi** Rakennusliikkeen ja sijoittajan välinen yhteistyö kiinteistökehityshankkeiden alkuvaiheissa

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**Maisteriohjelma** Real Estate Economics

**Koodi** ENG24

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**Työn valvoja** Professori Heidi Falkenbach

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**Työn ohjaaja** Minna Vierula

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**Päivämäärä** 07.04.2019

**Sivumäärä** 65 + 2

**Kieli** englanti

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### **Tiivistelmä**

Suomen ikääntyvä rakennuskanta sekä alati muuttuva yhteiskunta tekevät peruskorjauksista ajankohtaisia, muuttavat tilojen tarvetta, sekä lisäävät asuntojen kysyntää erityisesti kasvukeskuksissa. Seurauksena on, että tilan kysyntä ja tarjonta eivät kohtaa, ja syntyy tarve kehittää olemassa olevaa rakennuskantaa. Varmistaakseen sujuvan korjausrakentamisen tai rakennusten kehitysprosessin, rakennusliikkeet tarvitsevat tiedon sijoittajan tavoitteista ja kiinteistöstrategiasta, ja sijoittaja tarvitsee rakennusliikkeen teknistä tietotaitoa ja kustannustietoa.

Kiinteistökehityksestä ja kiinteistökehitysprosessista sekä yhteistyön eri näkökulmista on paljon kirjallisuutta. Tämän tutkimuksen uutuusarvo liittyy rakennusliikkeen ja sijoittajan välisen yhteistyön tarkasteluun asuntojen kiinteistökehityshankkeiden alkuvaiheissa. Tarkastelu kohdistuu vaiheeseen, jossa rakennusliike ja sijoittaja aloittavat yhteistyön, määrittelevät projektin tavoitteet ja päättävät kuinka projektin ja yhteistyön suhteen jatketaan. Tätä vaihetta on kuvattu alternatives analysis -termillä.

Työssä käytetään olemassa olevaa kirjallisuutta tarkasteltavan yhteistyön taustojen ymmärtämiseksi. Kirjallisuuskatsauksessa esitellään kiinteistökehityshankkeiden pääsidosryhmät, kiinteistökehitysprosessi tapahtumasarjana sekä yhteistyön teoriaa. Kerättyä tietoa hyödynnetään ja syvennetään empiirisessä tutkimuksessa, jossa haastatellaan sijoittajia ja rakennusliikkeen edustajia puolistrukturoiduilla haastatteluilla.

Kirjallisuutta ja haastatteluita vertailemalla työ kuvailee rakennusliikkeen ja sijoittajan välistä yhteistyötä kiinteistökehityksen alternatives analysis -vaiheessa ja luettelee tähän yhteistyöhön liittyviä haasteita. Tutkimus osoittaa, että luottamus on yksi tärkeimmistä osatekijöistä yhteistyön aloituksessa, ja että kommunikaation parantamiselle on tarvetta usealla eri tasolla, mukaan lukien omien tarpeiden viestintä, kiinnostus toisen osapuolen näkökulmiin ja avoin asenne yhteistyössä.

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**Avainsanat** Kiinteistökehitys, Yhteistyö, Sijoittaja, Rakennusliike, Kannattavuustutkimus

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## Foreword

This thesis was conducted for my current employer Consti Julkisivut Oy. The subject was formed in a brainstorming together with Sonja Laiho who has always been an encouraging and a cheerful boss. Together, we found an idea that both serves the company and is also highly interesting a subject to study from a professional point of view. The process of writing the thesis has been rewarding, as it has been the first work of this scale that I have done entirely on my own.

Special thanks to the thesis advisor Minna Vierula and the supervisor Heidi Falkenbach. Minna has been a dear workmate, always cheering with the writing and keeping up the positive atmosphere at the office. Heidi has been one of the most inspiring and motivating professors I have had the privilege to have. Without supportive attitudes and constructive criticism from both of them, this thesis would look very different.

I also want to thank all the interviewees, with whom the discussions were fascinating, and co-workers whose comments on the subject proved the complexity and ambiguity of the researched topic.

A warm thank you to my wonderful family for supporting me during the thesis, showing flexibility and helping me to get my mind off the work when I needed it the most.

Helsinki, 7<sup>th</sup> April 2019

Iina Ahonen

## Table of Contents

Abstract	
Tiivistelmä	
Foreword	
Table of Contents.....	5
Terminology.....	7
1 Introduction.....	9
1.1 Background.....	9
1.2 Research Questions and Scope .....	9
1.3 Study Design.....	10
1.3.1 Research Data .....	11
1.3.2 Research Methods.....	11
1.4 Structure of the Thesis .....	12
2 Residential Real Estate Development Project .....	14
2.1 Need for Development.....	14
2.2 Stakeholders of Real Estate Development.....	15
2.2.1 General Overview .....	16
2.2.2 Real Estate as a Development and Investment Object.....	18
2.2.3 Real Estate Developer.....	18
2.2.4 Real Estate Investor .....	20
2.2.5 Building Contractors .....	22
2.3 Real Estate Development Process.....	23
2.3.1 Developer's Perspective.....	23
2.3.2 Constructor's Perspective in Relation to Developer's .....	25
2.4 Alternatives Analysis .....	27
3 Collaboration in the Alternatives Analysis Phase.....	30
3.1 Feasibility of Development Projects.....	30
3.1.1 Investment Analysis and Development Costs.....	30
3.1.2 Development Schedule .....	31
3.1.3 Development Quality .....	32
3.1.4 Risk Analysis .....	33
3.2 Role of Constructor-Investor Collaboration .....	34
3.3 Theories on Collaboration .....	35
3.3.1 Success Factors of Collaboration.....	35
3.3.2 Agency Theory.....	36

3.3.3 Network Theory .....	37
4 Empirical Research .....	39
4.1.1 Study Design .....	39
4.1.2 Background .....	39
4.1.3 Interview as a Research Method .....	40
4.1.4 Preparation for the Interviews .....	41
4.1.5 Conducting and Analysing the Interviews .....	42
4.2 Interview Results .....	44
4.2.1 Real Estate Development Business .....	44
4.2.2 Project Development .....	46
4.2.3 Collaboration .....	49
4.2.4 Business Development Possibilities .....	51
4.3 Research Quality .....	52
5 Discussion and Conclusions .....	55
5.1 Key Findings of the Research .....	55
5.2 Research Quality .....	57
5.3 Conclusions and Suggestions for Further Research .....	57
References .....	57
List of Appendices .....	65
Appendices	

## Terminology

The terminology in this thesis includes phrases that might have varying meanings in different contexts and languages. The Finnish translations have been added to the ones that have a significant risk of misunderstanding.

**Alternatives analysis** is the author's term used for the real estate development process phase that is under observation in this thesis. The phase begins with the first contact of a constructor and an investor and ends where the constructor presents professional advice on the direction the project should be advanced to next. The phase might be done under a contract, or it can be done without one. A more comprehensive description of the phase is offered in chapter 2.4.

**Building contractor**, also *contractor* (in Finnish: *rakennusurakoitsija*) is a construction company that is the implementing party in construction contracting.

**Construction company**, also *constructor* (in Finnish: *rakennusliike*) is “a business enterprise concerned with the construction of buildings, bridges, etc.” (Collins, n.d.).

**Construction contracting** (in Finnish: *rakennuttaminen*) consists of project arrangements, organising design, construction and commissioning, as well as managerial duties of the guarantee period (RT, 2009).

**Client** (in Finnish: *tilaaja*) is the party that orders the building contract. The client can be a property developer or a contractor (RT, 1998).

**The efficient market hypothesis** is a theory commonly used in financial economics stating that the market reflects all relevant information in determining security prices (Malkiel, 1989).

**Institutional investor** is a large organisation, for example, a bank, a finance company, an insurance company or a pension funds, that has considerable cash reserves that need to be invested (BusinessDictionary, n.d.).

**Real estate**, also *property* or *real property* (in Finnish: *kiinteistö*), in a Finnish legal context, is a unit of ownership for a land or water area that is registered in the land register and includes buildings, benefits and easements. In colloquial Finnish, the term is used to refer to buildings alone. (RAKLI, 2012, p. 10.) Because real estate investments can be either direct or indirect, such as shares or funds (RAKLI, 2012, p. 44), in this thesis, the definition of real estate used in this thesis also includes the indirect forms of real estate.

**Real estate developer**, also *property developer* (in Finnish: *kiinteistökehittäjä*) is the party that aims to increase the value of a real estate by investments.

**Real estate development**, also *property development* (in Finnish: *kiinteistökehitys*), has multiple definitions, but it has been described as a “process that involves changing or intensifying the use of land to produce buildings for occupation” (RAKLI, 2012, p. 12), or a process altering the purpose of use, improving the usability or intensifying the usage of a real estate (Tuominen, 1996, p. 40). The goal of real estate development is to increase the value of the object. Real estate developer invests capital to gain from their expected future

income. (KTI, 2001, p. 16.) In this thesis, the development projects under observation include repair construction of residential buildings and rebuilding where the use is altered into residential use.

**Real estate investor** (in Finnish: *kiinteistösjöittäja*) is a party investing capital in real estate or its part to obtain profit or other benefits (RAKLI, 2012, p. 44).

**Rebuilding**, also alteration of use (in Finnish: *muutosrakentaminen*) is repair construction which is conducted to change the purpose or the manner of use of the object. (RAKLI, 2012, p. 37)

**Repair construction** (in Finnish: *korjausrakentaminen*) is “construction that alters a previously constructed entity towards the desired result” and more closely it can be for example *modernisation* (in Finnish: *perusparantaminen*), where the object is made more suitable to its use, *restoration* (in Finnish: *entistäminen*), which is done to preserve or restore cultural values, or *rebuilding* (in Finnish: *muutosrakentaminen*), where the purpose of use is changed (RAKLI, 2012, p. 37). Repair construction is considered when a building is outdated by technical, functional, economic or locational features, or when there are flaws in functionality, experientiality or technicality (Kaivonen, 1996, p. 372).



# 1 Introduction

## 1.1 Background

Along with the ageing building stock of Finland, periodic renovations become topical producing demand for repair construction (RAKLI, 2018). Hietala et al. (2015) estimate that the annual technical need for the repairs between the years 2016 and 2025 is approximately 3.5 billion euros and that urban apartment houses will have the most significant increase in the need for repair. In addition, in the Helsinki Metropolitan Area, there are high vacancy rates in offices whose space quality or locations do not meet the needs of tenants, driving property owners into redeveloping (KTI, 2018b).

At the same time, in the planning-construction-process, improvement is needed regarding requirements analysis, systematic requirement specifications, consideration of uniqueness of projects and proofing of building conformity (Sulankivi et al., 2002). These issues come across when initiating collaboration between a constructor and an investor. To enable functioning repair construction or development processes, the constructor needs to know the idea and real estate strategy the investor has determined, and the investor needs the technological know-how and cost awareness the constructor has to offer.

Pekkanen (2005) has found that one of the key issues affecting the quality of the customer relationship is the coordination of the subprocesses included in the project. In addition, it is often recognised that the development processes have numerous parties whose perspectives must be considered. However, the literature rarely goes into the details of the collaboration or to the definition of successful collaboration. As for this research, the focus is on the early stages of a constructor-investor relationship, referred to as alternatives analysis phase in this thesis, and a look into its improvement possibilities is included.

## 1.2 Research Questions and Scope

The research gap of the thesis is found by focusing on the alternatives analysis phase of the development process, and observing the collaboration there occurs between a construction company and an investor looking for development opportunities. The information is combined from both a literature review and interviews to enable valid findings. The challenges the collaboration face is a topical issue to first study, and then solve, as the need for residential real estate development and repair construction continues. The research can provide valuable information to be used to improve this relationship and the process of reaching the goals of the parties.

The primary research problem is to increase knowledge on the challenges that there currently are in a constructor-investor collaboration when analysing the alternatives of a residential real estate development project. The problem is formatted in two research questions:

- 1. How can the constructor-investor collaboration be described in the alternatives analysis phase of a residential real estate development project?**
- 2. What challenges does this collaboration face?**

To lay ground to the research questions, the thesis first observes real estate development and collaboration on a general level, however acknowledging the scope of the thesis that is limited by national context, development project targets and project phase. Interviews with investors and case company members concretise the research and deepen the understanding gained from the literature and seek answers to the research questions.

The thesis is written in the point of view of a constructor taking part in the constructor-investor collaboration with an intention to continue working together as the development project proceeds to implementation. The context is focused on the Finnish perspective; the research observes projects located in Finland, that have a Finnish constructor and the investor is either Finnish or otherwise familiar with the local real estate markets.

The phrase ‘real estate development’, in general, is an “operation whose purpose is to increase the value of an individual property, or the value of a certain area with property, by investments” (RAKLI, 2012, p. 12). In this thesis, the development projects under observation include repair construction of residential buildings and rebuilding where the use is altered into residential use. The value increase of these projects is the goal of the investor being the other party in the collaboration. Therefore, it is important to understand how the investor defines value.

The collaboration under focus occurs in the early stages of real estate development, where the investor and constructor first meet to discuss the project and its objectives. The observed phase ends when the constructor presents professional advice on the direction the project should be advanced to next. In this thesis, that phase is referred to as alternatives analysis. The term is connected to the real estate development process as it is portrayed in the literature in chapter 2.3 and described in detail in chapter 2.4.

In the previous research, the descriptions of the different parties involved in the projects are various and sometimes rather vague. In this research, the term ‘investor’ refers to the party that professionally funds or, on behalf of someone, has a mandate to fund a development project or a part of it. The investor could be, for example, a property owner developing the premises or an outside investor that has bought building rights to build an extension. The research does not take a stand on the perspective of a possible housing company related to the projects.

The information gathered in the thesis can be used to develop the referred collaboration. Studying the needs each party currently has helps in defining the needs for future projects. Defining the needs vital to succeed in the projects, because the requirements form the basis for the measurement of the construction quality analysis (Phua and Rowlinson, 2004).

### **1.3 Study Design**

The thesis focuses on the constructor-investor collaboration in the early stages of a residential real estate development project. The thesis is conducted for the house repair unit of Consti Julkisivut Oy, which also acts as a case company in the research. Using a case company allows to have an in-depth look at the existing collaboration in practice and bind the constructor and investor perspectives into a unity.

The research has a literature review and an empirical part that consists of a set of interviews and their analysis. The research, including both the literature review and the empirical part, is qualitative. The literature review gives a comprehensive outlook on the theme of constructor-investor collaboration and lays a solid foundation for the interviews conducted in the later part of the research. The empirical section is based on the literature review and focuses on the research questions. The literature review is also used as a point of comparison to the results gained in the empirical part.

### **1.3.1 Research Data**

The research data of the literature review bases mostly on academic articles and textbooks, but also on some non-scientific articles and reports, online articles and other web sources to complement other material and to acquire topicality. The literature review balances between Finnish and international literature to gain a broad understanding of the subjects, yet keeping the national context.

The data of the empirical approach originates from interviews. The part aims to find new information on the topic and deepen the understanding gathered in the literature review. The interviewees include employees at the case company and investors that are contacts of the case company employees. Thus, the interviews cover different perspectives on the research topic. The list of the specific interviewees includes professionals from different backgrounds to gain as an extensive overview as possible.

### **1.3.2 Research Methods**

A literature review gives a decent overview of the collaboration and its challenges that are found in general. Only the empirical part dives into detailed examples. Without enough devotion to the literature review, would the question formatting of the interviews be more difficult and therefore the gained results perhaps less reliable.

The empirical section uses in-depth semi-structured interviews, done with one participant at a time. The method was chosen because it uses conversation as a learning tool, and the participants are likely to speak not only about the topic in question but also issues around it that might be interesting to take into consideration (Leavy, 2017, p. 139). Before conducting the interviews, their interview structure was planned and interview guides made. After the interviews, they are analysed and the results presented. They are compared to the literature to reach conclusions and answer the research questions. A more detailed description of the methodology used in the empirical research can be found in chapter 4.

## 1.4 Structure of the Thesis

This thesis comprises of five chapters, and the main content is divided into a review of existing knowledge on the constructor-investor relationship and an empirical study. The structure of the thesis is visible in **Error! Reference source not found..** The theoretical background is divided into two chapters, which together form the literature review of the research and form a firm base for the interviews. In addition, the empirical research chapter is formed so that it can be considered its own entity; in other words, it includes the description of the used methodology and presents the findings. Thus, readers that are familiar with the topic can find the relevant information of the interview in a single chapter. The summary of the findings and conclusions of the thesis are presented in the last chapter.

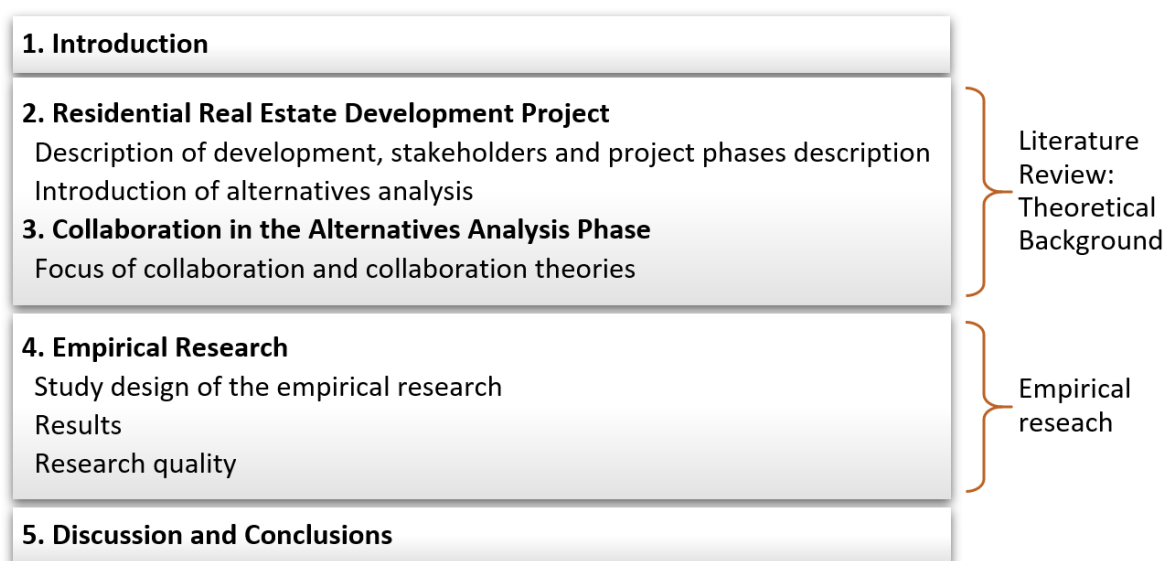


Figure 1 Research structure.

The first chapter of the thesis is introductory and provides the background of the subject and present the motivation, research questions and the scope of the research. In addition, it introduces the methodology and the structure of this thesis. The second and third chapters compose the literature review and at the same time, the theoretical background for the research. The literature review helps to see the essential challenges to be noted in the empirical part of the research. Chapter 2 presents the need for development, special features of real estate development as an investment object, real estate development process and stakeholders. Chapter 3 investigates which are the essential points to focus on constructor-investor collaboration and presents collaboration theories.

Guy and Henneberry (2002, pp. 8-13) have collected four board perspectives on the property and the development process: event-sequence models, agency models, production-based approaches and institutional models. Of these, the two latter ones are seen relevant to the research; event-sequence models look into the development process by dividing it into phases that include certain events, and agency models look into relationships and behaviour of the actors playing different roles in the development. (Guy and Henneberry, 2002, p. 9). Thus, using the latter model types, the thesis describes the development process in chapter 2.3 and looks into the collaboration of the process in chapter 3.3.2.

The fourth chapter presents the empirical research. It includes the specification of the study design and presents the backgrounds for the empirical research. The chapter presents the interviews and its results, and thus it can be considered to be the additional information the research provides to the existing literature. The fifth chapter supports the findings, as it makes conclusions of both the literature review and the interviews, and summarises the work, discusses the nature of the research and further research needs.

## 2 Residential Real Estate Development Projects

This chapter describes the framework of real estate development. First, it justifies the scope of the thesis and states the need for repair construction of residential buildings and rebuilding where the use is altered into residential use. Secondly, the chapter describes development projects by specifying their stakeholders and phases from development and construction points of view. Finally, the last section focuses on the alternatives analysis phase and binds these perspectives together.

### 2.1 Need for Development

Along the invariably changing society, the space requirements vary in time, often much faster than the life cycles of buildings come to their end. New technologies and ways of trade, the ageing population and new lifestyles, economic cycles and new working environments are only some of the reasons the need for space changes. As a result, demand and supply do not meet, and there are buildings without use. (Hernberg, 2014.) High vacancy rates bring insecurity, unattractive environments and financial and maintenance risks. Having the premises in an efficient and high-quality use would support sustainable city development and society to use resources wisely (RAKLI, n.d.).

In the property business, the opportunities related to developing old properties and the high vacancy rate of office properties has recently produced much discussion (KTI, 2017). Reuse of existing building stock is rational in many aspects. It utilises the resources better, forwards preserving cultural environments and maintains the vitality of the area. In addition, reuse is often more sustainable than new construction. For example, more and more of the emissions of the life cycle are caused in the construction phase and therefore, it might take 20-30 years to benefit from investments to more modern buildings compared to utilising the existing ones. (Hernberg, 2014.)

A typical property type to be left vacant is office property with an impractical location and premises that do not meet the current space requirements. However, many of these locations are quite suitable for residential buildings, bringing on discourse about possibilities to alter their use into housing. (Hernberg, 2014.) Indeed, although the occupancy of offices has slightly increased, their vacancy still remains high and pressured by new supply in the Helsinki metropolitan area. As for housing, the residential demand in Finnish growth centres remains high, and the rental level increases, supported by continued urbanisation and the strengthening economy. (KTI, 2018a).

Keeping the old building stock in use often requires repair construction, which is “construction that alters a previously constructed entity towards the desired result” (RAKLI, 2012, p. 37). Hyponyms for repair construction are modernisation, where the object is made more suitable to its use, restoration, which is done to preserve or restore cultural values, and rebuilding, where the purpose of use is changed (RAKLI, 2012, p. 37). Figure 2 reveals that the need for dwelling repair construction is centred on growth centres and Helsinki metropolitan area, where the demand stays strong due to urbanism (Tilastokeskus, 2017). According to Pikkarainen (2017), there are 740 000 floor square meters of space in Helsinki

that is under alteration of use, and the city of Helsinki has had even more preliminary enquiries.

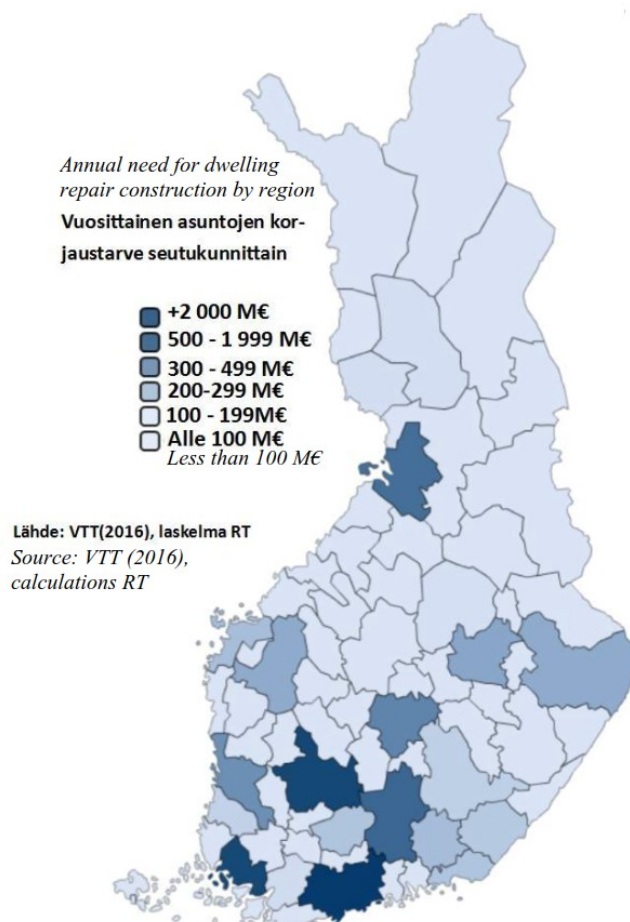


Figure 2 Average annual need for dwelling repair construction in 2016-2025 by region (Nippala & Vainio (VTT), 2016 and Pekkanen, 2017).

The need for repair construction depends on the life cycle of the existing building stock. Building regulations, used methods and materials have varied in history, affecting their current condition. For example, in the 1970s the buildings were constructed quickly and with an idea of a life cycle of 30-40 years, but the variation in condition is not enormous to older properties. (Hietala et al., 2015.) The need for development occurs when the building can no longer meet the requirements of its use since the purpose of a building is to serve the activities in it (Murtomaa, 1996, p. 398).

## 2.2 Stakeholders of Real Estate Development

Brown (2015, p. 14) describes real estate development as a “business venture financed by private investors and lenders who take serious risks with the objective of earning significant profits”. However, development has broad effects, concerning, for example, home values and enjoyment of public streets (Brown, 2015). This chapter presents different stakeholders and actors of a real estate development project keeping the focus on the Finnish perspective and dives into the roles of developer, investor and constructor in more detail. The developer

is included in the closer view, as they are the party advancing the project. In addition, the developer might also be the investor, in which case the perspective is essential to understand.

### 2.2.1 General Overview

In the real estate development process, the goal is to increase the value of the object (RAKLI, 2012, p. 12). The developer coordinates the process operated in landowner's property based on the user's operational, technical, qualitative and economic goals and timeline. Kiiras and Tammilehto describe this entity with a tripartite model presented in Figure 3. Each of the parties of the model has its own expectations and requirements regarding the development process, and there are also external stakeholders affecting the projects. (Kiiras and Tammilehto, 2014, pp. 24-29.)

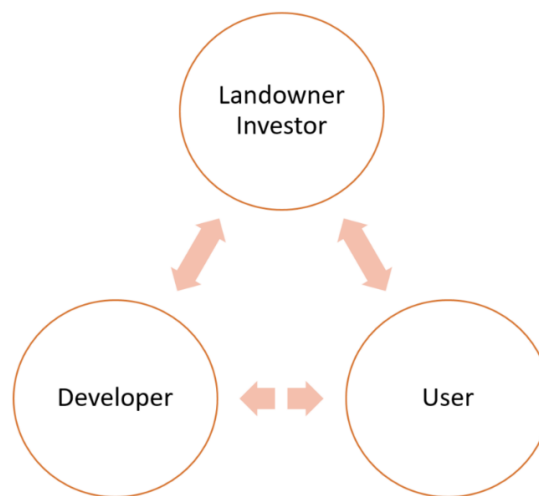


Figure 3 Tripartite model of the main parties in real estate development process (reproduced, Kiiras & Tammilehto, 2014, p. 24).

The tripartite model categorises the actors in three entities, although, the roles might not be as clear and segmented in reality. The landowner can be a user-owner, motivated by the needs of their own activities, or an investor-owner, willing to develop the property to gain profits. Public interest might also be a motivator, for example to a public organisation. Sometimes one party might even hold all the three roles: a user-owner investing own capital to meet its own needs better. Then again, there might not be only one user but many who have different perspectives. (Kiiras and Tammilehto, 2014, pp. 24-29.) Users can also be unknown or change frequently. Either way, the users' requirement for space is subject to rapid change. The user market is what determines rental levels, which together with capital values forms the value of development. (Morley, 2002, p. 76.)

Kiiras and Tammilehto (2014, pp. 24-25) mention that the parties have their own partners in collaboration, and that the stakeholders in the building phase are also numerous. Cadman and Topping (1995, pp. 10-24) and Reed and Sims (2014, pp. 16-31) list different stakeholders of a development project in approximate order of their appearance (see Figure 4). In their list, the professional team includes some of the same roles Kiiras and Tammilehto (2014, pp. 29-30) mention to belong to the building phase of the development process. In their categorisation, objectors that potentially cause delay or even abandonment of



development projects, include self-interested neighbours and well-organised professionals who take an interest in proposals affecting their local environment (Cadman and Topping, 1995, pp. 22-23). In Finnish literature, the role of the public seems to be emphasised more. The public has a possibility to influence the projects especially in their city planning phase (Kiiras and Tammilehto, 2014, p. 30).

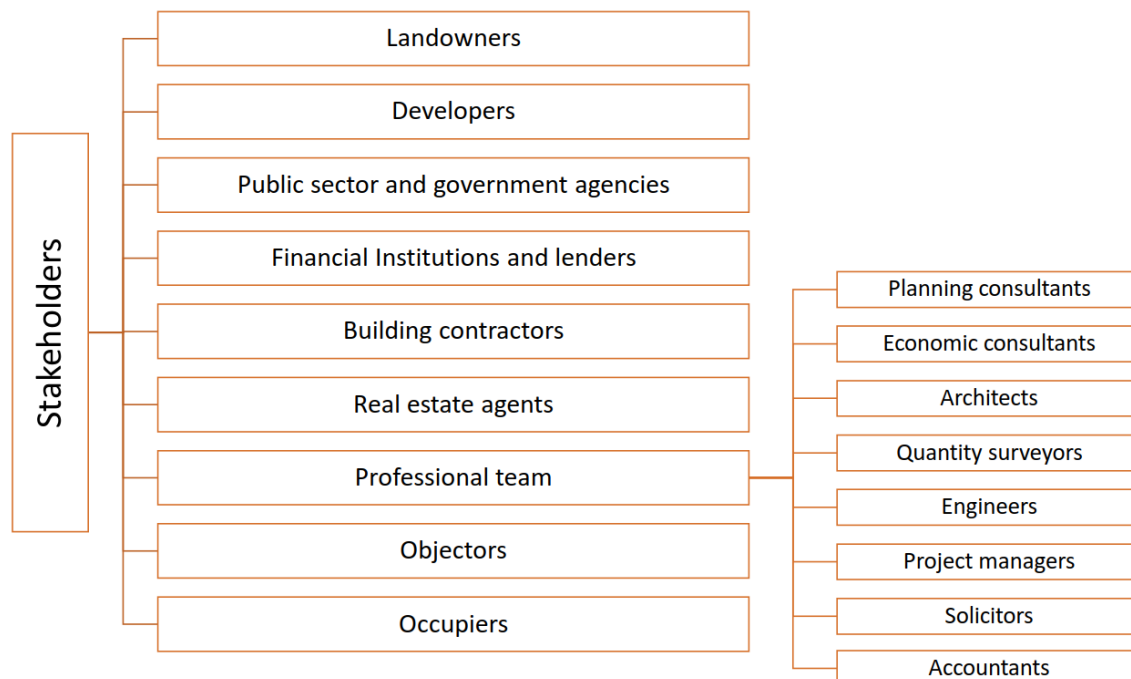


Figure 4 Main stakeholders / actors of real estate development process (compiled from Cadman & Topping, 1995, pp. 10-25; Reed & Sims, 2014, pp. 16-31).

Ball (2002, pp. 121-124) divides the professions of property development into functional types of market professionals, construction professionals and information and monitoring professionals. In his classification, market professionals have a role in the market condition advising, construction professionals provide skills in the design and management of building projects, and information and monitoring professionals provide data and analysis on construction costs, and assist in the formulation of specific projects by providing cost estimates for designs and planned construction programmes (Ball, 2002).

According to Caputo (2013), the emphasis of the previous literature has traditionally been in the internal stakeholders of a project, meaning those who are formally related to the project, and the external stakeholders, who in some way may affect the project, should also be taken into account. All in all, there are several actors and stakeholders in a real estate development process, whose existence, roles and importance vary case by case (Reed and Sims, 2014, pp. 16-17). Figure 4 presents one way to perceive the complexity of networks of real estate development projects. The following role descriptions focus on the developer, the investor and the constructor perspectives according to the scope of the thesis.

### 2.2.2 Real Estate as a Development and Investment Object

Real estate differs significantly from other assets. Its special characteristics are discussed here shortly to present the framework in which the different stakeholders operate. Firstly, a real estate is a factor of production and serves some purpose. It is also immovable, positional and durable, bringing out the importance of predicting the uncertain future. Then again, real estate is a lumpy asset; it requires a substantial amount of capital, it is difficult to divide, and it is regulated in many ways, including more static regulations about the construction process and maintenance, and more unforeseeable regulations about city planning, environmental risks and taxation. All these features affect investment qualities. (Tuominen, 1996.)

Accordingly to the conceptual framework of DiPasquale and Wheaton (1992), real estate markets can be divided into real estate space markets, consisting of rental markets and stock of space, and real estate asset markets, consisting of investment and construction markets. All these are connected, and the model illustrates the tight interaction between the space and the asset markets. The real estate markets are also very cyclical, bringing advantage or disadvantage to developers depending on how well they are able to forecast the timing of the cycles (Kiiras and Tammilehto, 2014, pp. 39-46). The most beneficial timing to begin the construction of a development object is 1-2 years before an upturn in the economy (Murtomaa, 1996, p. 400).

The value of a real estate as an investment depends on its ability to produce cash flow and to ensure stability or increase of its value (Kiiras and Tammilehto, 2014, p. 49). However, the real estate markets are imperfect: the information available is incomplete, the transaction costs are high, and market prices form in pairwise negotiations rather than being based on market terms. In addition, each property is heterogeneous, as even identical buildings differ in their micro-location. (Breuer and Nadler, 2012, p. 11).

Many financial theories are based on the Efficient Market Hypothesis. However, real estate appraisals cannot be standardised as they always have to take into account the specific geographical, typological and phase-specific features of each property. Real estate is also inflexible to changes in market demand, and it is considered to be quite a high-risk investment due to its complexity and multiple factors influencing the property value. (Breuer and Nadler, 2012, pp. 11-13.) Although substantial uncertainty is related to real estate, the methods and calculations produce ostensibly precise figures (Tuominen, 1996). These factors increase the importance of detailed risk analysis (Breuer and Nadler, 2012, p. 10-13). However, successful development projects also produce significant profits, not only for the owner of the property but also for the other stakeholders (Murtomaa, 1996, p. 399).

### 2.2.3 Real Estate Developer

The role of the real estate developer is to manage the diverse interests of the multiple stakeholders of the project (Wilkinson and Reed, 2014, pp. 12-13). There are private developers, public sector developers and public-private partnerships that develop projects with both public and private components (Miles et al., 2007, p. 40). A developer might charge fees according to commission contract, or the developer can be an investor of different time spans and make a profit in the form of rental income or appreciation materialised in sales. A shorter-term investor might sell the property after construction

period to residents or a long-term investor, and a long-term investor can hold the property and manage it even after development. (Kiiras and Tammilehto, 2014, p. 27.)

Essential areas of developer's expertise are markets and marketing, an acquaintance of contractual aspects, construction contracting and financing. In addition, the developer must take the needs of the customers into account, keep to the defined schedule and budget and manage risks. (Kiiras and Tammilehto, 2014, p. 28.) The developers rarely have the expertise for all the required skills, and therefore they select, motivate and manage a development team to get through the project while being the responsible party for the created space (Miles et al., 2007, p. 39). The development team described by Miles et al. (2007, pp. 40-61) is similar to the professional team in Figure 4.

As mentioned, developers can also hold other roles, and for example, own or occupy the developed property. After all, the owners of real estates are the ones that decide when or how their properties are developed, unless the task is outsourced (Ahola, 2006, p. 8). Overall, the developers vary in objectives, influencing the approaches to development appraisals, risks and other aspects of a development project. The range of developers includes property companies, institutional investors, building contractors, owner-occupiers and the public sector. (Morley, 2002, pp. 73-75.)

Property companies formulate their development strategies in accordance with the interest and expertise of their directors, their perception of the prevailing and future market conditions, as well as following the strategic direction they desire their organisation to pursue when looking forward (Reed and Sims, 2014, p. 19). Smaller companies often focus on small developments or do larger scale developments in a joint venture with a larger developer or funding institutions (Morley, 2002, p. 73).

Property companies can provide long-term investments for institutional investors by selling completed developments or their schemes, or they can work with a fund throughout the development process and be compensated with a fee. Financial institutions can also develop their investment objects themselves, and due to their long-term view, they might be able to accept lower development profit margins, as long as a sufficient internal rate of return is achieved in the end. (Morley, 2002, p. 74.)

In Finland, Kojamo, SATO and Avara are the biggest residential property investment companies, of which especially Kojamo and SATO have been active investor-developers of their non-subsidised portfolios. There are also several property funds that alter uses of properties into residential, such as Auratum, Real Assets of AXA Investment Managers, NREP and Bearings Real Estate Advisers. (KTI, 2018b.)

In the institutional side, many pension funds, including Varma, Keva and Elo, are significant players in the Finnish rental residential market, both through their own portfolios as well as indirect exposure through specialised property companies and funds. There is temporary legislation allowing pension insurance companies to leverage their residential property investments up to 50% until 2022, which has also boosted their investments on residential development. (KTI, 2018.)

Some building contractors are active in the development field, not only through partnerships with property companies, but they often are developers themselves. Constructor companies are willing to take risks related to development, as the continuity of development create cash

flows in the construction activities. (Morley, 2002, p. 74.) Especially significant they are in the Finnish commercial property development market, where the construction companies, such as NCC, Skanska, YIT, Hartela, SRV and Peab, operate with their special arm specialised in commercial property development. In recent years, in particular, construction companies have been active in housing development projects, which they sell to investors or homebuyers. (KTI, 2018b.)

Significant owner-occupiers developing for their own occupation are typically retailers, S Group, Kesko and Lidl being the most relevant ones in the Finnish markets. For the public sector, the most significant enterprise is Senate Properties that holds, manages and develops most of the Finnish state properties. (KTI, 2018b.)

## **2.2.4 Real Estate Investor**

According to RAKLI (2012, pp. 43-44), real estate investment is the action of investing capital in a real estate or in its part to obtain profit or other benefits. Real estate investor and real estate owner are partially lapping concepts, but the motive of the investor is to obtain profit. The real estate investments can be divided into direct investments, in which capital is invested directly in real estate or in shares of a housing co-operative entitling the shareholder-owner to possess a certain part the real estate, and indirect investments, in which capital is invested in a real estate investment company or fund operating with real estate. (RAKLI, 2012, pp. 43-44)

Real estate investments can be viewed using a four-quadrant model presenting the equity/debt and private/public dimensions. On the equity side, the return is based on how the real estate assets are valued in the markets, and in the debt investments, the return is tied to the pricing of risk in relation to the risk-free rate of return. Public, i.e. listed, markets have a standardised marketplace that private markets lack. This marketplace creates the basis for transparency, liquidity and pricing efficiency, influencing the transaction costs and, on the other hand, the return possibilities. (Hoesli and Lekander, 2006.)

The aim of real estate development is cash flow and appreciation, and thus development is investment activity (Kiiras and Tammilehto, 2014, p. 49). However, in the literature, the investor and developer are often distinguished. As mentioned, the developer might be the main investor, or to be commissioned to the project. In fact, a real estate development project might utilise different types of financing (Cadman and Topping, 1995, pp. 118-163).

For example, in the land acquirement, the developer may use equity or combine equity with debt financing, equity provided by the developer or coming from a partnership between the developer and the landowner or other investors. A construction loan or an interim loan generally refers to a loan to construct the building and other site improvements that usually comes from a commercial bank, a mortgage banking company, or, in some cases, a savings and loan association. (Brueggeman and Fisher, 2011, pp. 515-517.) The investors use the available market knowledge and financial tools to acquire profitable real estate investments, whereas lenders are entities that provide a portion of the purchase price to the investor in the form of debt (Goddard and Marcum, 2012, p. 4). A real estate development project needs short-term financing for the development phase and long-term finance to repay the developers' short-term borrowing (Cadman and Topping, 1995, p. 118).

Investor's objectives are often divided into three categories that describe the risk and return of investment: core, value-added and opportunistic. In this segmentation, the core assets usually have high occupancy, stable cash flows over long periods of time, and they have a low investment risk. The risk related to value-added investments is higher, and they typically involve value creation through improvements to physical conditions, operations, or management of properties. The highest risk class is opportunistic investments, which might include significant property development intentions. (Peng and Thibodeau, 2013.) Whether the development is classified into a value-added or an opportunistic project, is the real estate development always a risky investment.

The return attribute, usually expected return, is targeted according to the core-opportunistic categorisation. The risks include, for example, property risks, portfolio diversification risks, leverage, ownership control risks, shareholder/governance risks, et cetera (Kaiser, 2005). The risk can be influenced by adjusting the timing of the investment since the risk decreases as the development proceeds. Investors can also press for a certain portion of the premises to be pre-let before the investment. (Kiiras and Tammilehto, 2014, p. 59.) Figure 5 shows a simplified real estate development process and depicts different risk scenarios depending on the market situation or otherwise the ability to pre-lease the premises (Brueggeman and Fisher, 2011, p. 512), pointing out the grounds for investors' demands.

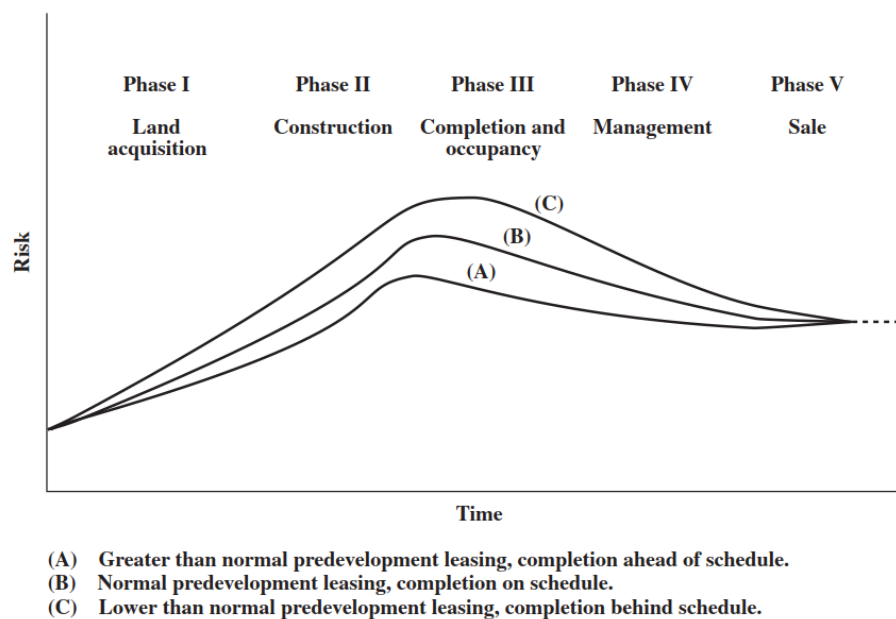


Figure 5 Phases of Real Estate Project Development and Risk (Brueggeman & Fisher, 2011, p. 512).

Investors can be individuals, partnerships, corporations or Real Estate Investment Trusts (REITs) that are corporate entities specifically designed for real estate investments (Goddard and Marcum, 2012, p. 4). In Finland, the institutional investors have traditionally been a dominant party in the real estate investment markets as they are large organisations that have considerable cash reserves that need to be invested (BusinessDictionary, n.d.). In KTI's classification, institutional investors are those institutions that invest in several asset classes (Soutamo, 2019). They usually have quite conservative strategies, and they emphasise repair construction and rebuilding of existing assets especially now that there is an oversupply of office premises in the Helsinki metropolitan area. Overall, they typically pursue more active strategies in residential development, as it is considered less risky than commercial property

development. Other notable investor groups are international investors and private property companies. (KTI, 2018b.)

When it comes to residential development, there are notable differences between owner-occupants and investors. Occupants typically look for solutions suitable for their lifestyles, whereas investor's objectives lie in the stable profitability. It is vital for the investor to be able to predict the expectations of the future residents, as well as the general development of the area's economics and residential markets, to be able to invest wisely. (Vainio et al., 1998.)

In addition to the risk and return, there are also various other factor playing a role in the investment decision: occupancy level, property type, location, size and quality, stage of development, exit strategy and targeted strategies (Kaiser, 2005). Especially attractiveness and durability of the premises are essential quality features investors appreciate, as they keep the property profitable. To enable constructors to know the requirements and quality definitions of the investor, collaboration is highly beneficial. It can also help the investor with the identification of various possible approaches and understanding of the different tenant segments. (Vainio et al., 1998.)

### **2.2.5 Building Contractors**

Developers employ building contractors to construct the development scheme. Construction companies that perform the construction work can be large or small in terms of volume of work performed and the number of people employed. The companies can also specialise in a particular market segment or a type of work that is being performed, while the business of general contractors have a broader scope of types of work performed. (Rounds and Segner, 2011, p. 4.) As mentioned, the building contractors might also have the role of the developers and take the development risk of their projects.

There are a variety of possible project delivery methods to share the responsibility and risk between the developer and the contractor (Cadman and Topping, 1995, pp. 200-236). Using certain contracting types, the risks of developer and contractor can be adjusted (Cadman and Topping, 1995, p. 200) and the suitability of the contract to the specific project can be ensured (Salminen, 2017, p. 7). The risk related to construction projects is indeed notable. Construction sites, and the environment in which the work on a construction project is performed, vary greatly with regard to numerous factors. Successful contractors are those who learn methods to recognise, mitigate, and deal effectively with the numerous risks that the work in the industry entails. (Rounds and Segner, 2011, p. 7.)

In Finland, there are five basic project delivery methods that are used as they are, or modified when needed. The methods are design-bid-build contracts (in Finnish: pääurakkamuodot), design-build contracts (SR-urakkamuodot), life-cycle delivery methods (elinkaarivastuumuodot), construction management at risk (projektinjohtomuodot) and collaborative delivery methods (yhteisvastuumuodot). These models differ in three components: their extent and sharing of responsibility, basis for payment and incentives and procurement process. (Salminen, 2017, pp. 23-26.) The decision on the contract form depends on customer's requirements and the size and complexity of the development (Cadman and Topping, 1995, p. 200).

## 2.3 Real Estate Development Process

In the literature, the real estate development process is typically presented with an event-sequence model, preoccupied with development project management (Guy and Henneberry, 2002, p. 9). On the other hand, there is plenty of literature describing the process of a building project, including similar phases as the event-sequence models. When looking at the collaboration where these two perspectives meet, it is important to understand both viewpoints. Hence, here the process is described in both of these two perspectives, and then the perspectives are compared.

### 2.3.1 Developer's Perspective

There are several process descriptions illustrating the real estate development process. Often, they are presented as events-sequence models whose contents are similar, but the terminology, emphasis and perspectives vary (Fisher and Gillen, 2005). Table 1 compares some of the models and parallels them to the terminology of this thesis, highlighting the studied alternatives analysis phase. The sequence of the process phases is based on the original sources, and the categorisation to terminology used in this thesis is based on the author's interpretation. However, it is important to remember that each development process is unique and that the actual sequence of events depends on the circumstances (e.g. Fisher and Gillen, 2005; Cadman and Topping, 2008; Kiiras and Tammilehto, 2014). The comparison of the phases to the alternatives analysis is discussed more in section 2.4.

When looking at the differences between the models in Table 1, it is evident that their emphases vary and that the models have been written from different perspectives. The models of Brown (2015, pp. 64-69), Cadman and Topping (1995, pp. 2-10), Reed and Sims (2014, pp. 3-16) and Wilkinson and Reed (2008, pp. 2-10) are similar with each other, of which the latter two use the exact same terminology. Interestingly, the scopes of their books are different. Cadman and Topping, as well as Wilkinson and Reed, limit their viewpoint to development involving commercial property, whereas Reed and Sims do not specify the property type. Brown focuses primarily on the development of city centre sites for multifamily residential projects, for-sale condominiums and rental apartments, and for mixed-use projects that include a combination of housing, commercial office, and retail.

The models of Birrel and Gao (1997, in Fisher and Gillan, 2005), Kiiras and Tammilehto (2014, p. 67), Burton (2000) and Consti (2016, p. 6) are also included in the comparison, as they provide different perspectives on the process. Birrel and Gao include the site selection, market analysis and site investigation in the development process. These steps collate the basic knowledge that is needed before any development ideas can be considered. None of the models denies the role of the preparing steps, but the Birrel-Gao-model, as well as the model of Kiiras and Tammilehto, depart from the other models as they present site search and market analysis separately from the development idea.

The process recommendation of Consti (2016) is focused on residential real estate development. The model is not scientific, but is based on the viewpoint of the case company, and is relevant as it has the same scope as the research has – it focuses on residential repair

and conversion construction. Burton's (2000) model is focused on process aiming to develop a vacant residential real estate parcel successfully. The phase descriptions are more detailed than in the other models due to the sharper scope definition. However, the viewpoint of new construction is clearly visible in the model.

Table 1 Comparison of different real estate development events-sequence models (Consti 2016; Brown, 2015, pp. 64-69. ; Kiiras & Tammilehto, 2014, p. 67; Reed & Sims, 2014, pp. 3-16; Wilkinson & Reed, 2008, pp. 2-10; Cadman & Topping, 1995, pp. 2-10; Burton, 2000; Birrell & Gao, 1997 (According to Fisher & Gillen, 2005)).

Terminology used in the Thesis	Consti (2016)	Kiiras & Tammilehto (2014)	Brown (2015)	Reed & Sims (2014); Wilkinson & Reed (2008)	Cadman & Topping (1995)	Burton (2000)	Birrell & Gao (1997), according to Fisher & Gillen (2005)
Basic knowledge collation		1. *Search of a possible development target 2. * Present state analysis					1. Opportunity / site selection 2. Market analysis 3. Site investigation
Alternatives Analysis - Phase under observation	1. Kannattavuusselvitys *Feasibility study	3. Search for new business idea for the property  3.a) *Development of new business idea  3.b) *Feasibility analysis of the new business idea	1. Concept   2. Approvals	1. Initiation   2. Investigation and analysis of feasibility	1. Initiation   2. Evaluation	1. Create development idea 2. Control the vacant site or undeveloped land 3. Complete a preliminary market feasibility study 4. Have the preliminary plans and specifications drawn	4. Feasibility study 5. Professional appointments
Design	2. Kehitysvaihe *Development phase		3. Design	3. Acquisition 4. Design and costing	3. Acquisition 4. Design and costing	5. Obtain a mortgage financing commitment 6. Cause the final market feasibility study to be completed 7. Complete the engineering final plans and 8. Estimate the final total costs, direct and indirect 9. Complete a discounted cash flow analysis of inflows and outflows 10. Analyze various risks associated with the proposed development	6. Financing 7. Planning application 8. Site assembly / purchase 9. Design
Implementation	3. Toteutus *Implementation	4. Marketing  5. * Construction contracting	4. Construction	5. Consent and permissions 6. Commitment 7. Implementation	5. Permissions 6. Commitment 7. Implementation	11. Begin actual construction of the streets, utilities, and lots	10. Tendering / contracting 11. Construction
Use	4. Käyttö *Use	6. *Introduction / use	5. Sales	8. Leasing / management / disposal	8. Let / manage / dispose	12. Marketing and Selling	12. Promotion 13. Letting 14. Sale

\*translation by author



Kiiras and Tammilehto (2014, p. 5) aim to provide a general overview of real estate development in Finnish. Unlike the other models, they have an own phase for marketing, whereas the others include marketing in the entire process. Using a 4 Ps model (product, price, place, promotion) and +3P (people, process and physical evidence), they remind that marketing has more aspects than just marketing communications that is often paralleled to marketing in engineering. They also separate marketing into the way of thinking and the methods. According to Kiiras and Tammilehto (2012, p. 12), the real estate development process proceeds into construction contracting when the marketing phase has succeeded.

### 2.3.2 Constructor's Perspective in Relation to Developer's

Finnish publisher of instructions for building and property management, regulations, contract documents and forms and product information, Rakennustieto Oy (Rakennustieto, n.d.), has published an instruction RT 10-11256 (RT, 2017a) that describes the process of a building project in perspectives of construction contracting, designing and construction. It includes a building project description divided into seven phases, visible in Figure 6. The phases are roughly in sequential order, although, the tasks can be overlapping and settle in different phases (RT, 2017b).

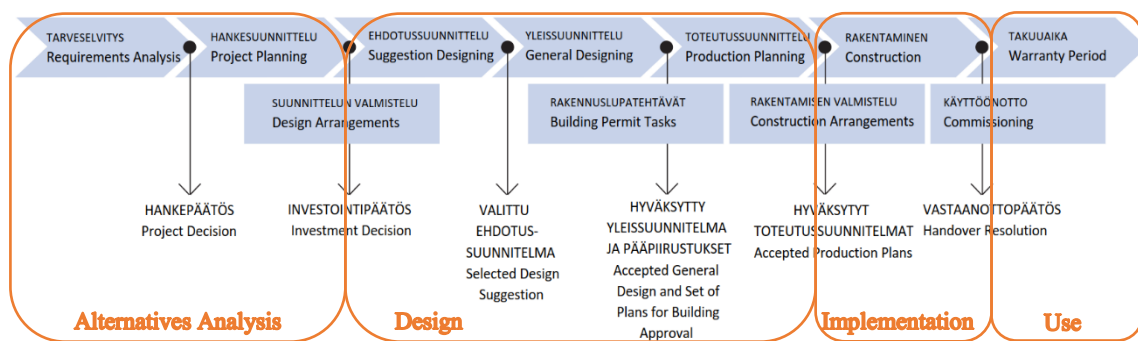


Figure 6 Phases of a building project (reproduced by author, RT, 2017a).

Another publication, a worklist for project management and construction contracting RT 10-11284 (RT, 2017b), includes the tasks included in each of the phases:

- *Requirements analysis* contains justifications for the space need, rough description and requirements of the needed premises and studies different alternatives and their affordabilities.
- *Project planning* contains specific targets regarding the dimension, functionality, quality, costs, timing and maintenance. The product of the phase is a project plan, including the requirements of the implementation and designing of the project.
- *Design arrangements* include having the necessary clearances made and deciding a preliminary project delivery method. In addition, the phase includes organising the designing, having negotiations, deciding on the designers and making designing contracts.
- In *suggestion designing*, different design alternatives are made to meet the set requirements.

- In *general designing*, the selected design suggestion is developed into a general executable design. The general design might also have alternative space arrangements.
- *Building permit tasks* consist of looking into the permit procedures required for the project, ensuring the competence of the designers and the acceptability of the general designs, and finally, compiling a permit application.
- In *production planning*, the general design is developed into dimensioned plans and product definitions.
- *Construction arrangements* include organising the construction, inviting tenders on subcontracts, having negotiations and making piecework and procurement contracts.
- In *construction*, the covenanted implementation, requirement fitting result and necessary are enabled.
- In *commissioning* the system functionality is confirmed, and guide to using is given.
- *Warranty period* includes monitoring the functionality of the building, having warranty period adjustments and inspections and fixing possible deficiencies. (RT, 2017b.)

In the building process, similar phases can be perceived as in the event-sequence models. Hence, in Figure 6, the same phases are highlighted in orange as Table 1 presents as the terminology to be used in this thesis. Only the basic knowledge collation phase seems to be missing from the building process. Furthermore, Kiiras and Tammilehto (2014, p. 12) outline that construction contracting, including similar phases as described above, is the next step in the development process after marketing, as Figure 7 presents. According to them, development planning is the last phase of the development process, acting also as a project planning of construction contracting.

Although Kiiras and Tammilehto (2014, pp. 12, 99) argue that the development process ends where the construction contracting begins, have the other studied resources reached the development process description all the way to the use or disposal of the object. However, as all the sources of the comparison mention, the events in the development process might vary in order and emphasis. Therefore, the beginning of construction contracting has no fixed point in the development process.

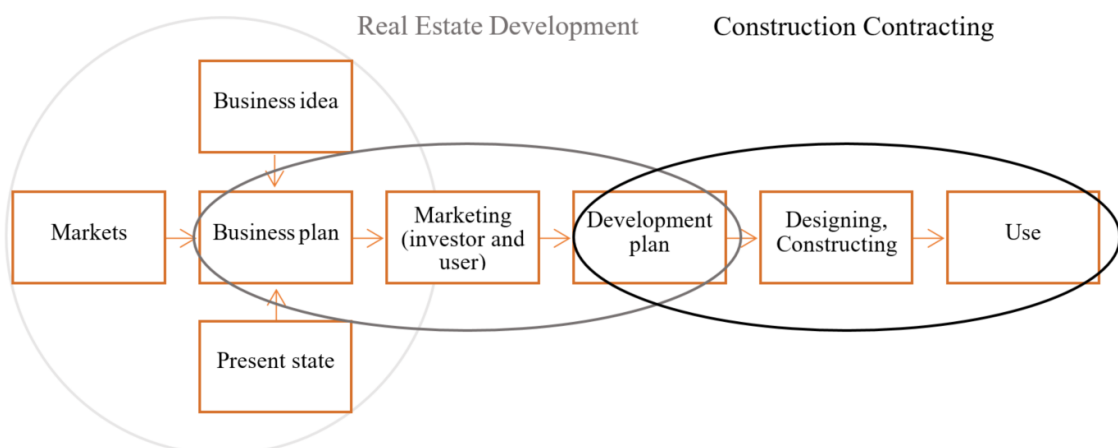


Figure 7 Relation of the real estate development process and construction contracting (reproduced by author, Kiiras & Tammilehto, 2014, p. 12).

## 2.4 Alternatives Analysis

According to Kiiras and Tammilehto (2014, pp. 104-105), when a project proceeds into construction contracting, the project development team should arrange a kick-off meeting. In the meeting, the goals and contents of the project are presented to the project team, distributions responsibilities are defined, the parties are committed to goals and tasks, the team members get to know each other and form a pleasant work atmosphere, the policies, control mechanisms and risks are clarified and the most urgent work is begun.

Even before this, there is the first contact between the constructor and the client, in this case, the developer or the investor, where the first encounter takes place, and the objectives are defined. This thesis uses the term ‘alternatives analysis’ to describe the stage where the investor and constructor first meet to discuss the project and its objectives. Chapter 2.3.2 reached a conclusion that construction contracting is a sub-process to development that does not have a fixed point in the development process. Thus, neither does alternatives analysis, that combines the viewpoints of investor and constructor, refer to a specific project phase but instead focuses on the first steps of the collaboration. Table 1 has the perspective of a developer, and the alternatives analysis is marked to cover quite early phases of the development process because the partnership of a constructor and a developer-investor can already then be utilised. Similarly, the alternatives analysis covers the requirements analysis and project planning in Figure 6, as that is where the approach of the development is defined and collaboration begins.

In Ahola’s (2006, p. 5-7) development process model, the phase before detailed designing is called envisioning and project planning. The goals of the phase are to map the state of the property and create a target state in which the property should be in after the development. (Ahola, 2006.) It is similar to the requirements analysis and project planning in Figure 6, but neither of the sources mentions the initialisation of collaboration. In the target state, the property meets the needs of an owner-occupier or the profit requirements of an investor-owner. In the envisioning and project planning phase, it is essential to have sufficient resources to study different options for the target state and have a clear and consistent process for choosing one. (Ahola, 2006, p. 5.) Here, ‘project planning’ refers to planning the frames for development, no matter whether it is done with or without the constructor. Hence, it can be part of alternatives analysis or not.

As the investor can either be a developer, an external financier of a certain part of the project or a party looking for alternatives to other investments (Kiiras and Tammilehto, 2014, pp. 25-26), the alternatives analysis can refer to very different circumstances. The goal, however, is to find out how to proceed with the collaboration to meet the needs and requirements of both parties. In any case, the risk and return, as well as other expectations, need to be clarified, and if the investor is also a developer, the level of influence each party has for the project is essential to agree.

In the case of developer-investor, the alternatives analysis phase is similar to the feasibility study in Consti’s process model (see Table 1) but has a broader definition. The phase begins with the first contact of a constructor and an investor, and it ends where the constructor presents professional advice on the direction the project should be advanced to next, or come to a conclusion that the project is not realisable with the discussed parameters. The phase

might be done under a contract, or it can be done without one to encourage the investor to continue collaboration in the actual development phase.

The goal of construction contracting is to implement the idea whilst keeping the costs according to profitability calculations and schedule (Kiiras and Tammilehto, 2014, p. 12). In the alternatives analysis, the possible preliminary profitability calculations can be gone over, and the analysis can produce a preliminary budget and risk assessment in the construction point of view to be used in the more accurate calculations. In this sense, the collaboration with the constructor can be highly beneficial, and it could be used to define the target of the development project.

The success of a construction process is dependent on the perspectives, and it can be divided into a macro viewpoint, which observes whether the original concept was achieved, and a micro viewpoint, which deals with project achievements in smaller component levels, such as time, cost, performance and quality. Generally, the macro viewpoint represents the perspective of the owner, users and stakeholders and the micro viewpoint represents the investor-developer and contractor perspectives. (Lim and Mohamed, 1999.)

Further, Fischgrund and Omachonu (2014) have found twelve gaps in construction presented in Figure 8, that defect impression of quality. Various factors affect the client's expectations, such as the reputation of the construction company and the needs of the client. These expectations might not be met if the construction company misinterprets the customer's requirements, there is a problem in the construction company's service delivery, the client's perception affects their expectations, or there are local codes, ordinances or regulations that prevent the fulfilling the expectations. (Fischgrund and Omachonu, 2014).

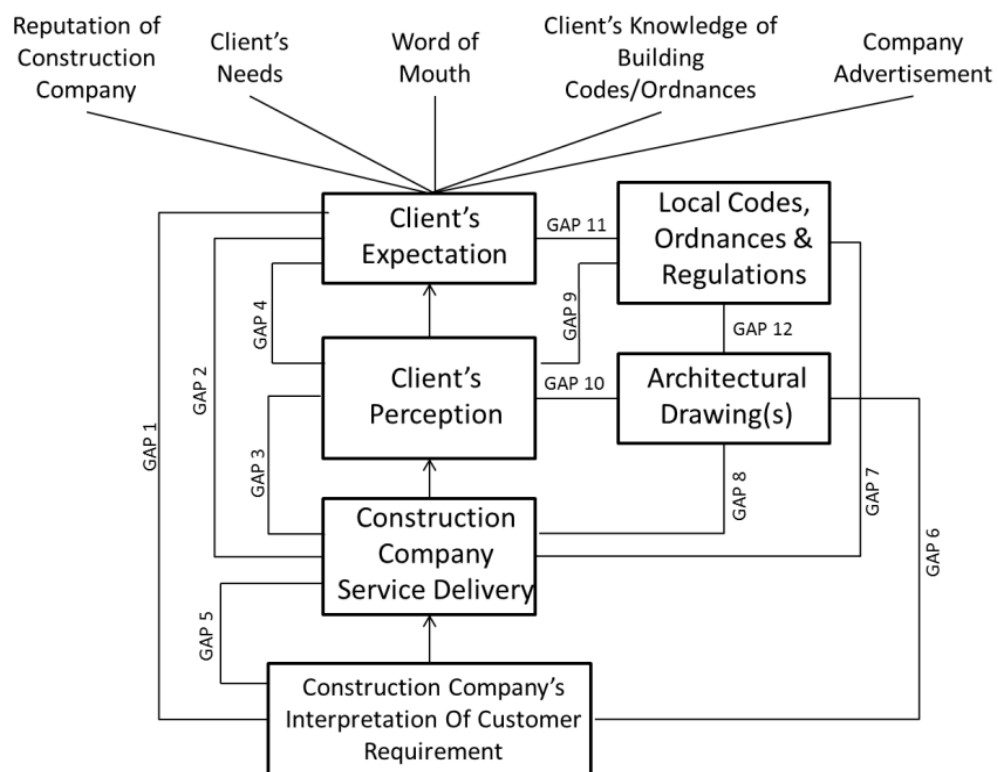


Figure 8 Quality gaps in construction (Fischgrund and Omachonu, 2014).

In addition, there are several other gaps between the interpretations of different stakeholders, for example, the architectural drawings might not match the construction company's the interpretation of the customer requirements. In their research, Fischgrund and Omachonu found that expectations regarding construction service outcomes would be better placed if the customers had some knowledge of the industry and they could explain their needs to the representatives of the construction firms better. (Fischgrund and Omachonu, 2014).

### 3 Collaboration in the Alternatives Analysis Phase

As mentioned, the alternatives analysis is strongly linked to the feasibility study, especially in the case of a developer-investor. This chapter first presents the feasibility study from the viewpoint of alternatives analysis and then reviews the literature on collaboration. It discusses the collaboration in real estate development projects and presents some useful theories that can be used in developing it.

#### 3.1 Feasibility of Development Projects

As mentioned, the alternatives analysis is strongly linked to the feasibility study, especially in the case of a developer-investor. Soon after the first contact between an investor and a construction company, the needs and requirements are assessed in terms of financial feasibility, quality and schedule requirements, and the level of risk tolerance. The needs are the base when different alternatives are considered, and in order to understand the basis for conversation, these factors are presented in the following.

Phua and Rowlinson (2004) also suggest that quality and keeping in the budget and are the most common criteria for evaluating the successfulness of a construction project. Therefore the following sub-chapters take a closer view of the mentioned factors and analyse their role in the decision-making in the early stages of a development project. In addition, risk analysis is included, as realised risks can affect all of those mentioned above and the relationship of risk and return is part of an investor's decision making as explained in chapter 2.2.4.

##### 3.1.1 Investment Analysis and Development Costs

As stated in the introductory chapter, the understanding of how the investor defines value is essential for the investor-constructor-collaboration. Investment analysis is used to define whether a development scheme should be accepted or discarded. The value of a real estate is dependent on its ability to produce cash flow and to maintain or raise the invested capital. (Kiiras and Tammilehto, 2014, p. 49.) According to Wyatt (2013, p. 26), the economic life of a building depends primarily on its earning power and only secondarily on its structural durability. Similarly, Brown (2015, p. 279) states that despite the variance in developers, the one thing they have in common is the aim to produce a profit.

Often, the term feasibility analysis is used to refer to both market analysis and financial feasibility, even though they are separate and distinct. The analyses also need to be re-examined as the property development process proceeds. Overall, the contents of financial feasibility analyses vary. They can include, for example, the estimation of total capital outlay for the project and total net project income, development of a cash flow projection for the development period, estimating the profitability of the project and evaluation against investment objectives and a complete a risk analysis on the proposed project. (Costello and Preller, 2010.)

Market analysis studies the supply and demand relevant to a property, and it is the foundation for economic decision making. Productivity analysis is the base for investment analysis of a

property. It analyses the property's characteristics to achieve a competitive position in the market. It examines how the market perceives the physical, legal, and locational dimensions of a property, also taking behaviour and psychological factors into account that are related to the people involved in the real estate – in other words, the tangible attributes are linked to market preferences. (Fanning et al., 1994, pp. 3, 35-49.)

Financially, a development project is only viable if the development site value is at least the same as the existing use value, and if the value of the completed scheme is at least equal to the total development costs, including the price of the land and the developer's profit. (Wyatt, 2013, p. 403-408.) There are a few most commonly used appraisal methods that are straight-forward by the concept but have high sensitivities to small changes in multiple variables that in turn are difficult to estimate accurately. This highlights the importance of the expertise of the developer or the developer's advisers (Morley, 2002, p. 75-77).

The method most frequently used for appraising the financial viability of development schemes is residual valuation. It can be used to calculate site value or development profit. In the method, the cost of development is deducted from the value of the completed scheme, leaving a residue or residual sum. At later stages, where more specific and accurate information about the project is available, more detailed calculations, such as cash flow approach, can be used. In addition, sensitivity analysis and forecasting and probability analysis give a more detailed picture of the potential viability of projects. (Morley, 2002, p. 75.)

The cashflow approach includes a more detailed definition of the timing of the development costs and allows to observe the net cash flow of each separate reference period. An even further developed approach, discounted cash flow, adds a discount rate into the calculations, making projects of different sizes and lengths comparable. Taking the timing of each cost and profit realisation into account is essential, as it can affect the profitability of the projects notably. In addition, the estimation of building costs, in particular, is emphasised because they are the major component of development expenditure. (Morley, 2002, pp. 86-95.)

The building costs are related to, first of all, the design of the constructed building, but also to the project delivery method affects the building costs and the risks. User needs can be met with different solutions affecting the costs, and shifting responsibility from the investor to the construction company by delivery method decreases the investor's risks but usually increases the building costs. (Kiiras and Tammilehto, 2014, pp. 61-62.) The development costs also include possible demolition costs, professional fees, planning application and building regulation costs, contingencies, financing and letting and sale fees, marketing costs, et cetera (Morley, 2002, p. 77).

### **3.1.2 Development Schedule**

As mentioned before, the objectives and timespans of different investors vary. For example, the idea might be to sell the developed real estate after or it can be left for the investor to manage (Ahola, 2006, p. 1). The development project might be one of many in a closed-end or open-end fund, which affects the investor's requirements for the development schedule. The terms and costs of financing vary depending on the phase that the financing concerns. (Kiiras and Tammilehto, 2014, p. 25.)

Due to the cyclicity of real estate and construction businesses and their sensitivity to economic fluctuations, the timing of the development might bring notable advantages or disadvantages, depending on the market situation (Ahola, 2006, p. 2). The market cycles might change over short periods of time, whereas complex development schemes take multiple years to complete. Even though the situation in early market cycle is uncertain, the risks will increase with competition. (Brown, 2015, pp. 207-209.) As stated before, the most beneficial timing to begin the construction of a development object is 1-2 years before an upturn in the economy (Murtomaa, 1996, p. 400).

As mentioned in the previous section, time can also have a notable impact on the profitability calculations of the investment. For example, in multi-phase developments, some buildings can be let or sold before others are completed. (Morley, 2002, p. 86.) The profitability calculations are also very sensitive to changes in the length of the observed cashflow and especially to the annual profits (Kiiras and Tammilehto, 2014, pp. 53-55).

As a conclusion, there are multiple ways time affects the success of a development project. It is essential to know when the cash flows occur and when the profits are realisable, how long the construction and development take and whether the project will keep to the schedule.

### **3.1.3 Development Quality**

In the construction contracting phase, the goal of a developer-investor is to produce a good quality building on time and within budget (Cadman, 1995, p. 236). In order to succeed in the constructing phase, quality must be defined. According to Harris and McCaffer (2013, p. 9), quality can be defined as the sum of attributes for a product or service that enables it to meet the requirements or specified need of the customer related to the perceived value for money. Therefore, the quality aims need to be clarified at the beginning of the construction process (Pekkanen, 2005) and they are dependent on the party evaluating success.

In the theory of attractive quality presented by Kano et al. in 1984, quality attributes can be divided into five quality dimensions. Attractive quality attributes are generally not expected but provide satisfaction when fully achieved. One dimensional attributes bring the more experienced quality, the more they are fulfilled. Must-be attributes do not increase satisfaction when fulfilled but result in dissatisfaction when not. Indifferent quality attributes are aspects of a product that do not result in customer satisfaction or customer dissatisfaction. Finally, reverse quality attributes which bring dissatisfaction when achieved. Over time, the classification of each attribute can change as the customers begin to expect something that used to be indifferent. (Löfgren and Witell, 2008.)

Using the theory of attractive quality model (Kano et al., 1984), the importance of different requirements for development could be analysed further. For example, Vainio et al. (1998) have listed requirements for buildings and further, requirements for the parties of a construction project, which could be developed further to cover their quality dimensions. In addition, there are some common definitions and standards for ensuring quality in construction projects. The Confederation of Finnish Construction Industries, RT (2018), mention faultlessness, fluent construction process and successful customer relationships as features of good quality construction.



In Finland, the Construction Quality Association, Rakentamisen Laatu RALA ry, certifies companies and maintains a competence register for their competence and reliability on quality issues (RT, n.d.). In addition, the general conditions for building contracts, YSE 1998, includes clauses for quality assurance concerning both the client and the contractor of the project (RT, 1998).

According to Pekkanen (2005), the features and technical quality as well as keeping in the budget and schedule are in the interest of each customer of a construction project but they need a definition at the beginning of the project. However, there are multiple tasks in a construction project that are often left without definition. The main definitions of the attributes and quality should be made at the beginning of the construction to set the common goals for the project. Additionally, clients often are willing to participate in decision making as the project proceeds, especially if the scope of the project changes. (Pekkanen, 2005.)

### 3.1.4 Risk Analysis

Real estate development as a business is by nature full of risks (Brown, 2015, pp. 7-10). Therefore, risk analysis is often a part of the financial feasibility study of possible development schemes. In financial analysis, a risk is defined as the likely variability of future returns from a given asset. (Castello and Preller, 2010.) However, risks, although they many times realise in financial terms, include also non-monetary risks.

Because the real estate developers cope with a wide range of uncertainties, especially in the early project phases, the known risks and uncertainties must be managed. Risk management is deciding and executing risk-response measures based on quantified risks (Reymen et al., 2008). In project management literature, risk management includes four iterative phases: risk identification, risk estimation, risk response planning and execution, often managing the risk management process is included. Managing risks is essential, as all opportunities come with risks related to them. (Klemetti, 2006.)

Although risks are widely studied, the literature has not reached unanimity its definition. However, it can be said that the impact of risks varies greatly depending on the conditions at the time of the possible occurrence. In addition, the significance of risks depends on who is assessing them. The significance is different in different viewpoints. (Klemetti, 2006.) Khumpaisal (2011) defines risk as “a potential negative impact to an asset, project or some characteristic of value that may arise from a present process or future event” (p. 2).

Another way of approaching risks is to see the uncertainty of project characters. Especially, the early stages of property development are exposed to a wide range of both known risks and uncertainties, defined as unpredictable or uncontrollable risks. In their paper, Reymen et al. (2008) present a new framework for managing uncertainties in property projects. They suggest the use of an adjusted version of Scrum, a design method for the development of consumer-based software, called Rescrum. The method is based on continuously working together with the development team and having feedback at the end of phases and milestones. (Reymen et al., 2008.)

According to the definition of Reymen et al. (2008, p. 581), risks are “uncertain events or conditions that, if they occur, have a positive or a negative effect on a project objective”. In

fact, there are multiple classifications of risks and frameworks to ease the recognition of them. For example, according to Costello and Preller (2010), risks related to development projects are business risks, financial risks, liquidity risks, inflation risks, management risks, legislative risks, environmental risks and risks related to, for example, zoning, approvals and infrastructural risks. These risks by nature, are so-called unsystematic or specific risks that are specific to a certain investment object. In addition, there are systematic risks that are related to broader economic and political issues and cannot be controlled by the investor, such as market risk or inflation risk. (Khumpaisal, 2011).

### **3.2 Role of Constructor-Investor Collaboration**

The article of Phua and Rowlinson (2004) has found that numerous sources describe the collaboration between construction organisations to be the basis of construction project success, regardless of research scope and context. They also bring out the difficulty of accurately measuring project success as the literature lacks consensus regarding its meaning and how it is brought about. In the study, they used five major groups of construction project success factors: co-operation, contractual characteristics, micro project environment, site conditions and political and economic stability. From these, two first ones reflect project success, but their experienced importance is different according to the type of actor. (Phua and Rowlingson, 2004.) Co-operation and contractual matters are also observed in agency theory that is discussed in chapter 3.3.2.

Previous literature has found early collaboration with different parties to be beneficial in the development process. The early stages are essential because, during them, the most critical decisions are made (Reymen et al., 2008), and the majority of development costs are fixed (Henneberry and Rowley, 2002, p. 102). However, the stage is difficult to control due to numerous actors and lack of certainties (Reymen et al., 2008) and because the financial calculations are imprecise at that point (Henneberry and Rowley, 2002, p. 102).

Due to the complex nature and several stakeholders of a real estate development project, collaboration between professionals is a necessity to achieve client objectives (Ball, 2002, p. 125). For example, collaboration enables different professionals to communicate risks which helps to understand the full range of risk comprehensively (Klemetti, 2006). In a situation with multiple professionals, however, moral hazard or opportunistic behaviour can arise. The information in a development project is asymmetrical – each specialist has information others lack. These factors highlight the vitality of trust between the parties, which is costly as it takes more time to undertake work in a way that others can follow on from easily. (Ball, 2002, pp. 116-133.)

Trust between professionals has been found to be one of the most significant success factors in intercompany relationships. The concept of trust can be defined in multiple ways. It can be common trust or based on system, personality or process. It can occur between individuals or companies, and it is built in a social interaction where the given promises are clear and redeemed. Before experiences on a partner, the trust is based on the actor's reputation, and within a contractual relation, it is based on openness, honesty and redeeming promises. (Pekkanen, 2005.)

Relationships can create competitive advantages by encouraging actors to make longer-term investments and to take higher risks. Collaboration is especially beneficial in construction projects due to their complex nature, which requires a number of actors to work together. However, the risk that the other party tries to take advantage of the trust in the relationship still exists. This emphasises the essence of making formal agreements to follow informal ones. (Klemetti, 2006.) The agency theory, which is presented in chapter 3.3.2, observes the relationship of two actors, using a contract as a unit of analysis (Eisenhardt, 1989).

### **3.3 Theories on Collaboration**

As stated in the introduction-chapter, agency models, also known as behavioural or decision-making approaches, look into the relationships and behaviour of the actors playing different roles in the development. There are multiple perspectives to the behaviour of different actors, starting from financial models that rationalise the behaviour with profitability, to relationship models between developers, industrial property and local regeneration in a declining economy. (Guy and Henneberry, 2002, p. 14).

However, the theories and models related to collaboration do not limit to these. All of the models present only a partial view of the world, and therefore, a few theories are presented. This chapter presents agency theory, representing the contractual viewpoint of collaboration, and network theory, expressing the interconnections between actors of a business field. They are used to build more understanding of the framework of collaboration better.

#### **3.3.1 Success Factors of Collaboration**

Mattessich and Monsey's literature review (1992) present factors influencing successful collaboration. Although the review is old, its findings in a general viewpoint are seen beneficial for this research. The scope of the review also leads to the conclusion that the most useful mix of factors depends on the situation but has to be estimated case by case. Therefore, the review supports the thinking of what might influence it in the case of real estate development as long as the results are interpreted as indicative ones. According to the review, the success factors of collaboration can be divided into six groups: factors related to the environment, membership characters, process/structure, communication, purpose and resources.

Environmental factors enable collaborative actors to have support and trust for the process. Membership characteristics, such as shared mutual respect, understanding and trust, representation of different segments affected in decision-making and having collaboration in the members' self-interest, support the working of the team. Process/structure factors, such as members sharing a stake both in process and outcome or participation in decision-making in multiple hierarchical levels, underline transparency and flexibility. Communication ensures fluent sending and receiving information, and it should be open and frequent and occur through informal and formal communication links. Concrete, attainable goals and objectives, as well as shared vision, motivate members by giving the collaboration a purpose. Lastly, sufficient resources are vital for collaboration to be fruitful. (Mattessich and Monsey, 1992.)

Marek et al. (2015) have developed the Mattessich and Monsey's factors further into a seven-factor model of effective collaboration with an accompanying evaluation tool, the Collaboration Assessment Tool (CAT). In their model, the factors are presented in similar categories, named as context, members, process and organisation, communication, function, resources and leadership factors. They saw the presence of a skilled leader so essential that they lifted leadership as their own category, unlike Mattessich and Monsey who considered it as a subcomponent of the resources category. (Marek et al., 2015)

### 3.3.2 Agency Theory

As the construction business has become more customer-centred while the respective actors are also reaching for individual benefits, the problem of target conflicts and information imbalances has even grown its importance (Schieg, 2008). These problems are dealt with in the agency theory, which explores the ubiquitous agency relationships, in which the so-called principal delegates work to the agent. The master thesis of Vasenius (2015) observes the agency problem in the Finnish real estate development projects, focusing on the construction phase. Yet, the literature on the agency problems faced in the earlier stages of real estate development is scarce.

According to the Eisenhardt (1989), the agency theory provides a unique, realistic, and empirically testable perspective on problems of cooperative effort. The theory is focused on two problems. The first one arises when there are conflicting goals between the principal and agent, and it is difficult or expensive for the principal to verify the work of the agent. The other problem is related to different attitudes towards risk, which may lead to different actions and problems in risk sharing. (Eisenhardt, 1989.)

The agency theory has two lines: positivist agency theory and principal-agent agency theory. Both of them use a contract as a unit of analysis, and they complete each other. Where the positivist stream identifies contract alternatives specialising in the owner/CEO-relationship, the principal-agent stream compares the efficiency of different contracts, having its focus in more general level and uses mathematical models. (Eisenhardt, 1989.)

The fundamental problem of agency theory is related to asymmetric information, which has three types of information and motivation problems: adverse selection, moral hazard and hold-up, i.e. nonverifiability (Laffont and Martimort, 2001; Schieg, 2008). In adverse selection, the client has a risk of choosing undesired contractual partners due to insufficient information on their qualification. Moral hazard arises when information asymmetries develop after closing the contract, and thus the client cannot supervise the quality of the agent's work, leading to a risk the agent will exploit the setting opportunistically. Hold-up is a situation, in which the client makes large irreversible investments that cause dependence on a specific cooperation relation, which the agent can use to gain bargain power. (Schieg, 2008.)

The information problems consequence, at least partially, from the cost of information because it causes coordination and motivation problems. The agency costs are the costs or efforts the agent and the principal undertake to reduce information asymmetry and the remaining loss of welfare, which is compared to the case of optimal information. However, reducing information asymmetries is, in addition to establishing target congruity and

allocating risks, the instrument with which the mentioned agency risks can be coped with. (Schieg, 2008.)

### 3.3.3 Network Theory

Networks have been studied broadly in different fields of science, for example for their ability to reflect patterns of human interaction and the spread of information and disease (Newman, 2001). They also provide a rich and complex metaphor for economic exchange relationships helping managers to understand the complex set of relationships involved in a modern business organisation (Easton, 2016). Social networks can be represented as a set of points denoting people, or other interconnected entities joined in pairs by lines denoting acquaintance (Newman, 2001). In economic models, the links between actors are usually defined in terms of economic exchanges (Easton, 2016). As for industrial network relationships, they comprise mutual orientation, dependence, bonds and investments that each participant has made in every relationship (Easton, 1994; according to Klemetti, 2006).

Social networks are always present in businesses, but especially when companies concentrate more and more into their core businesses, will the role of inter-organisational relationships be emphasised, as the companies aim to increase of productivity through partnerships. In order to have a competitive advantage, the companies must be aware of the complex entity of customer and supplier networks. The complexity of these networks and the variety of customerships is one of the special characteristics of the construction business. (Pekkanen, 2005.)

Relationships can be divided into embedded ties, which are based on long-term co-operation and trust, and arm-length ties, which might be more frequent but not as strategically significant. It is essential to recognise the embedded relationships and take care of them because they provide a competitive advantage compared to arm-length relationships. However, as discussed in chapter 3.3.2, that exposes the collaborating companies to opportunistic behaviour. The main components of embedded relationships are trust, fine-grained information transfer and joint problem-solving arrangements, and they require a personal touch and mutually developed working methods (Klemetti, 2006).

Collaboration and a clear division of responsibilities in the networks are vital for producing comprehensive construction services. In order to develop a good customer relationship, the contractor should not only take into account the needs and requirements of the nearest client, which is the one ordering the construction work, but also the needs of the end-user of the building. Ensuring long-term customer relations also includes different level companionship contracts and building trust between partners. (Pekkanen, 2005.)

Companies should study their current ideal social network position and aim for their ideal position. This requires examination of current relationships, maintaining and strengthening some relationships and loosening or terminating some. A cost-benefit analysis helps in choosing the strategies on each relationship. More stable networks complicate the entrance of competitors, as they cannot find a position in the markets, whereas looser networks, which are typical in fluctuating businesses, the entrance is more accessible and actors are more open to changes. (Low, 1997.)

A deeper analysis of networks is possible with actor-network theory (ANT). Unlike the network theory described above, it assumes that the world comprises networks of human and non-human actants, which are continually constructed and deconstructed. Ward (2018) used ANT to model the real estate development process and found that throughout the development process a developer creates a core actor-network and enrolls those required for production. In addition, sub-networks are created to overcome challenges caused by economic, cultural, legal and political structures. (Ward, 2018.)

The key initiating actor in a production-based actant-network of real estate development is a developer who is driven to create value from a site. The developer is an obligatory passing point, which all other actors, including the constructor, must pass and negotiate through to become involved in a development project. In addition, many non-humans inscribe the interests of actors, and therefore, they are notable in the network. (Ward, 2018.)

## 4 Empirical Research

The focus of the empirical research is in deepening the perspectives of the constructor-investor collaboration in the early stages of a residential real estate development project. The literature review has focused on the backgrounds of real estate development and collaboration. This chapter utilises the gained information in empirical research and focuses on the research questions of the thesis. The empirical research data is gathered in interviews conducted with experts of the case company and investors or representatives of investors that have collaborated with the case company. The chapter describes the study design and methodology used, presents the results and discusses their reliability.

### 4.1.1 Study Design

The empirical research consists of a set of interviews with both investor representatives and construction company representatives and their analysis. This section takes an in-depth view of the data collection and analysis methodology used.

### 4.1.2 Background

The empirical research is conducted aiming to answer the research questions:

1. **How can the constructor-investor collaboration be described in the alternatives analysis phase of a residential real estate development project?**
2. **What challenges does this collaboration face?**

According to Cambridge Dictionary (n.d.), a challenge is “(the situation of being faced with) something that needs great mental or physical effort in order to be done successfully and therefore tests a person's ability”. Therefore, the challenges in the early stages of a real estate development project are related to the experience of effort that is needed to make the development project successful. Thus, interviewing is a suitable research method. It emphasises the interviewed person as a subject and gives the interviewees possibility to point out issues that would not otherwise emerge (Hirsjärvi and Hurme, 2001, pp. 34-35).

### Case company

At the moment the thesis work was started, the author had worked part-time in the house repair unit of Consti Julkisivut Oy for five months. As the thesis is conducted for the company, it is natural to use it as a case company for the research. Using a familiar construction company enables a deeper understanding of their company culture and working methods that support analysing an individual case. On the other hand, it also makes it more difficult to report all the exploited information, reducing the verifiability of the research.

Consti Group Plc is one of the leading companies concentrating on repair and construction work in Finland. The observed house repair unit operates under Consti Julkisivut Oy, which

one of the three subsidiaries of Consti Group Plc. (Consti, n.d.) The house repair unit (“case company”) is specialised in comprehensive real estate development projects, such as alterations of use, infill development and façade and building services renovations. In the brochure of the unit, the collaboration between parties is emphasised to ensure good-quality and cost-effective, comprehensive solutions for the owner or the investor. (Consti, 2016.)

## **Investors**

The investor interviewees were earlier business contacts of the case company members, and they were used for three reasons. First, the interviewees are more likely to agree to participate when a familiar person suggests it; in other words, the participants are easily accessible (Leavy, 2017, p. 184). The second reason is that using the expertise of the case company professionals, it was known beforehand the interviewees actually represent the target group. Lastly, having the contacts as previous business contacts with the case company, the interview results of the constructor representatives and investor representatives are more easily comparable. A problem in this method is that limiting to these contacts only probably misrepresent the entire pool of actors. In addition, even though the researcher has promised not to present the raw data to the case company, has the background of the researcher in the case company a possible effect on the conversations.

The professionals of the case company asked the initial permits for the interviews because contacts from familiar persons were estimated to raise the response rate. This was especially important because the timing of the interviews fell around the busy time of December 2018 and January 2019. After their contact, the researcher called the interviewees to agree on the interviewing meeting with them. In the phone call, the topic and research questions of the thesis was explained, the time and place of the interviews agreed, and the basics of the interviews were discussed, for example, the semi-structured style and the purpose of gaining understanding on the investor point of view.

Four of the asked investor interviewees were able to attend the interviews in the time frame. Half of them were institutional investors and the other half non-listed property companies, totalling two persons representing each interviewee group: the case construction company, institutional investors and private investors. As the participants were business contacts from the case company, were the interviewees also persons that would represent the company in a development case, tracing authenticity. The final list of interviewees is available in appendix 1.

### **4.1.3 Interview as a Research Method**

An interview is a conversational tool (Leavy, 2017, p. 139) and many of its advantages are related to the opportunities the discussion offers, such as flexibility, possibility to link issues that would not otherwise be linked and ability to emphasise different parts with different interviewees. However, those mentioned above also bring disadvantages. For example, in order to conduct a quality interview, the researcher has to have the skills to guide the conversation to the relevant issues and simultaneously bring forward the perspective of the



interviewees. (Hirsjärvi and Hurme, 2001, p 35.) Because the researcher has little experience in interviews, planning and structuring of the interviews are emphasised.

The structure of the interviews was decided to be individual face-to-face and semi-structured because of the following reasons. Face-to-face conversations give the opportunity to build rapport and to utilise visual cues in the interpretation (Leavy, 2017, p. 125, 140-141). In this study, group interviews were not considered to be an option, because the interviewees represent different companies and their individual perspectives are essential for the research. In addition, guiding the conversation is easier and participation rates higher than in a group interview (Hirsjärvi and Hurme, 2001, p. 61).

Highly structured methods, such as questionnaires, have strictly beforehand closed questions and orders. They have little flexibility, and the participants cannot ask for definitions. The other extreme, unstructured interviews consist of open-ended questions and the researcher's primary role is to deepen the interviewees' responses and build the rest of the interview based on the earlier discussion. The semi-structured interviews have no universal definition, but characteristic for the method is that some aspects of the interview are predetermined but not all. (Hirsjärvi and Hurme, 2001, pp. 47-48.) Semi-structured interviews are suitable for this research because they together with more detailed interview guides are advisable for novice researchers, as the questions are a more natural way to guide the conversation (Leavy, 2017, p. 139).

#### **4.1.4 Preparation for the Interviews**

In the preparation process of the interview guides, the literature review was scanned while writing down the most relevant issues linked to the research questions. The first version of the interview guide was made using the notes and intuition with an idea to use the same guide for both the case company interviews and investor interviews to be able to compare the results better. In the guide, the discussed topics were arranged from general questions to more specific questions because the format gives participants time to get more comfortable while the rapport is built (Leavy, 2017, p. 140). The questions were built to gather ideas around the research questions.

A meeting with six professionals of the case company was held the 5 November 2018 to gather possible interviewees and to go through the preliminary interview guide. The professionals included project managers and project development managers, working within the project development projects, who advised on developing the interview guide to cover all the essential perspectives in the interviews. In the same meeting, it was decided who would be asked to participate in the interviews and who in the case company would contact the participants.

After the interview guide was developed in the case company meeting, it was went through once again and finalised using literature on qualitative research, such as cited Leavy (2017) and Hirsjärvi and Hurme (2001), for help. As mentioned, the same interview guide was used for both constructor and investor interviews. The final interview guide is available in appendix 2. In addition, some further questions were planned beforehand to guide the conversation if it would need more support.

#### 4.1.5 Conducting and Analysing the Interviews

The interviewees are visible in appendix 1 with the interview dates. The case company as a location for the investor interviews was avoided in order to keep the milieu as neutral and comfortable as possible to help the interviewees feel relaxed and discuss the topics more freely (Hirsjärvi and Hurme, 2001, pp. 96-98). Therefore, the interviews were conducted mainly in the offices of the interviewees, but one of them wished to have their interview on the premises of the case company. For the same convenience reason, the interviews were held in Finnish, the native language of both the researcher and the interviewees.

The researcher arrived for the interviews in time and began them with an introduction and casual discussion about the research and the studies they are related to. When the interviewee was ready, the recorder was turned on, and the interview began with an introduction of the studied company and proceeded to more specific questions. The researcher made sure that there would be a chance to give additional comments on the subject and in the end, additions were asked once more before closing the interview with thanks and a suggestion to contact the researcher should additional ideas or questions arise.

The interviews were recorded using a sound recorder because it enables coming back to their exact course of events later (Ruusuvuori and Tiittula, 2005). In addition, notes were used to pick up on markers, which are side notes on one topic that might lead to information that is important to the research (Leavy, 2017, p. 141). Because listening to the participants and building rapport with them is crucial for successful interviews (Leavy, 2017, p. 140), the notes were made using only keywords to avoid missing some of the discussion. Recording the interviews makes it possible to analyse not only the content of the conversations but also the interaction between participants (Ruusuvuori and Tiittula, 2005). The researcher is a novice interviewer and went through a learning curve as the interviews progressed. Additional reflection is provided in section 4.3, where the research quality is discussed.

After the interviews, the interview data were analysed using the five phases described by Leavy (2017, pp. 150-153), including data preparation and organisation, initial immersion, coding, categorisation and theming and interpretation. First, in the data preparation and organisation phase, interview records were transcribed and organised in a folder by the interviewees (Leavy, 2017). Transcription can be done with various degrees of precision. In this research, the researcher interviewed and analysed the materials alone, and the data will not be utilised for any other purposes, which decrease the need for extremely precise transcription. However, more precise transcriptions enhance the possibilities for analysis and exploitation but take more resources. (Tietoarkisto, n.d.). Thus, transcribing was done with rather precise notes on subjects around the research and interview questions and those that the researcher found fruitful for further research, and on a more general level around other topics. Timecodes were added to the transcriptions in case a need for analysing more precise phrasings occurs.

In the initial immersion phase, the data was browsed through to get the big picture of its contents, which was very helpful in the third phase, coding. The coding was done with a descriptive strategy using themes and key words that are decided in the initial immersion phase. Each sentence was classified under at least one of five themes and defined in more detail with key words. The used themes and key words, as well as their occurrence in coding

is presented in Figure 9. In addition, the information about which interviewee group each sentence present was added.

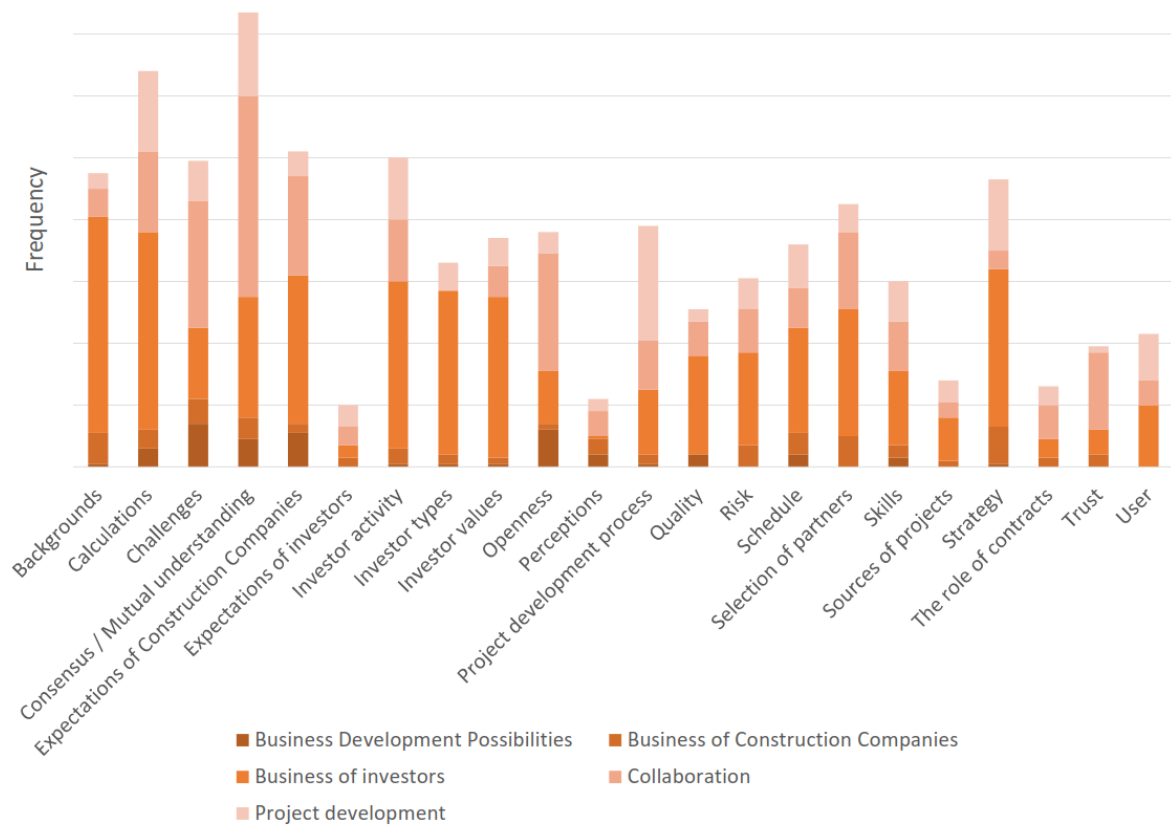


Figure 9 Occurrence of themes and key words in coding. Themes are presented in stacked bars and key words in the horizontal axis.

The theme of Business development possibilities means that the interviewee has presented an idea of how to develop the current way of doing real estate development business. Business of construction companies and Business of investors refer to the strategies and attitudes of each actor, Collaboration refers to any comments related to working together between companies and Project development that refers to experiences related to process and experiences on project development that the interviewees have. The categorisation into key words was quite loose. The classification was made even if the sentence even touched upon the subjects of a key word. In addition, classification into several themes or key words was allowed to broaden the perspectives each of them has.

The fourth phase in Leavy's (2017, p. 152) data analysis is categorising and theming. Thus next, similar or seemingly related codes were grouped, and, to link the coding into interpretation, memos of the groups written. (Leavy, 2017; Hirsijärvi and Hurme, 2001). The first memo is a short summary of the main contents of the interviews from memory not to get lost in detail. After that, the data was scanned systematically by themes and key words, writing down findings of each group. These memos were complemented with references to the literature review. Finally, the collected material was interpreted by looking for patterns across data. To ensure the findings, data triangulation was used by comparing the findings of the interviews with literature (Leavy, 2017, p. 153). The results are presented and

compared to the literature for triangulation in chapter 4.2. Evaluation of the research and analysis quality is discussed in chapter 4.3.

## **4.2 Interview Results**

This chapter displays the interview results by theme. The first section, real estate development business, discusses the backgrounds of the case company and the investors forming the base for the development projects. Project development section dives into the perspectives the interviewees have on the process, collaboration focuses on experiences on which factors need to be considered in intercompany projects, and business development possibilities looks into the ideas the interviewees have on improving the current business.

### **4.2.1 Real Estate Development Business**

#### **Interview results**

According to the representatives of the case company, the customer base of the company's project development section is quite broad. The biggest clients are owner-investors that have a need to develop their real estate portfolios, either by improving the existing real estates or getting new possessions through development. The majority of the owner-investors' projects reach the case company by bidding competitions, and the rest are collaboration projects. The clients can also be real estate fund managers, investors looking for an investment object, or owners of one or a few real estates whose possession or investment strategy they ponder.

The investor-customers of the case company can be roughly grouped by their investment limits. The bigger investors' businesses are often based on numerous real estates. They seek to profit from high volumes rather than risky ventures and might not have exact limits for the investments but rather observe whether the equation fits their strategy otherwise. The smaller investors are often more adventurous, and they use leverage to finance their projects. In addition, there are various intermediate forms of these classes and investors that are not that interested in the details of a project but merely see it as a financial investment. When asking about the investors' attitudes towards risk, the responses were rarely straight-forward. As expected, the institutional investors are more or less risk averse, but the private sector investors' attitudes towards risk seem to vary more.

Part of the construction company business is to gain an understanding of the customers and combine projects to investors according to investor profiles. According to the case company interviewees, some of the investors expect construction companies to suggest projects that they can either reject or develop further. They believe that each investor has profitability calculation templates that emphasise the key figures that are the essential ones for the very investor. Thus, if the investors would present them to the collaboration partners, that would help them in understanding the financial goals and in focusing on the right matters in the project development.

One problem from the viewpoint of the case company is that project schedules are often tight. The investors expect the first cost estimations from the construction companies

quickly, which soon are presumed to be binding and to have detailed cost information. However, the initial cost estimations include many assumptions and thus, the process takes time. Few investors are willing to make a collaboration contract, and thus projects can be lost to competitors even after extensive background work. Sometimes the investors are so insecure about their projects that investing too much time on them is a risk, although understanding their needs would be a key to a contract with them. It is a strategic decision on which projects the workforce is directed and how exact calculations are provided. Therefore, the construction companies need a good idea of the market and its actors to be able to react in time to the projects they want.

According to the investors, the busy schedules often derive from the needs of users. Some businesses have certain time frames when opening a new business is most profitable. In projects that are purely residential, the pressure for near completion date is not as high, but in the viewpoint of an investor, a delayed opening means delayed cash flow and thus lower profits. The investors' attitudes towards the length of the alternatives analysis and designing phase vary. Some of them do not find the length problematic at all, and they rather emphasise proper planning and background clearances than proceed to implementation with a lot of uncertainties. On the other hand, some take it as an industry-wide challenge. They want to advance to decision-making faster to get a hold on the cash flow and to avoid problems that arise as the market has time to change before the projects are implemented.

### **Comparison to the literature**

The interviews found that the customer base of the case company is quite broad. Chapter 2.2 display the spectrum of real estate developers and investors and mention that the roles of the actors might vary from project to project. This leads to a need for a clear understanding of the expectations and needs each of their customers has, which affects the scope of the work and, for example, resourcing of the case company. However, as the interviews found, the majority of their customer base consists of large private and institutional investors, whose projects are more customary.

The financial objectives of private and institutional actors have to do with either maximising cash flows or improving their appreciation. The investor interviewees' strategies fit this, as their main businesses are on rental markets and developing the real estates is mainly a measure of support. All of the interviewed investors are investor developers, and the majority of them are also owners. Therefore, the perspectives the interviews accumulate are focused on this particular investor group.

On the grounds of the interviews, positioning the investors in the risk-return-axis is difficult. The reason might be the various components real estate development risks have, such as property risks, leverage and ownership control risks, as discussed in chapter 2.2.4. On their attitudes towards risk, many of the interviewees mentioned that their strategies vary according to location and property type, and risk control measures, such as pre-leasing and including users to the development process, but did not define their risk categorisations.

Time is a crucial factor when it comes to profitability of a real estate development project. In chapter 3.1.2, it was stated that timing can bring notable advantages or disadvantages (Ahola, 2006, p. 2) and affect the profitability of a project (Morley, 2002, p. 86, 88). The

effects of the cyclical nature of the markets to the profitability of the development projects have been discussed by for example Murtomaa (1996, p. 400), Kiiras and Tammilehto (2014, pp. 39-46) and Breuer and Nadler (p. 54). In addition, the risk of the development decreases as the development proceeds (Kiiras and Tammilehto, 2014, p. 25) as stated in chapter 2.2.4. Therefore, although thorough background work is important to know the details of a planned project, the desires of some investors to shorten the early project phases is reasonable.

## 4.2.2 Project Development

### Interview results

Each property is on a certain point in their lifecycle. Some investors that own or manage real estate define the positions carefully with structured methods, while others react to arising problems. Either way, there is some trigger that leads to the development of a property, which always has its own characteristics. This trigger could be for example low demand of the premises or an increasing maintenance backlog. The latter could be reduced by keeping the maintenance level high enough to prevent backlog accumulating.

Next step is analysing the problem and starting the project planning. The investor tries to find the causes and the solutions for the problems found. The property might have flaws or disadvantages in its condition, parking possibilities, the attractiveness of its façade or a too high rent level considering the aforementioned. Investments to lowering the future operational costs, such as improving energy efficiency, or completing renovations that have been estimated to be too expensive in the building management plan can be profitable to cash flow and real estate value.

The problems are analysed taking into account an investor specific time span. The institutional interviewees seem to focus more on the life cycle costs, while on the private side the time span varies and can depend on the business strategy or fund objectives. Even then, longer-term goals can be taken into account with instructions in design manuals. If a rent decrease will not be enough to make the property profitable, the investor sells the property or begins its development process. As mentioned, the development processes always have their own characteristics. For example, in areas where regulations require a substantial amount of parking spaces, especially new development possibilities might be limited by the parking spaces the development team are able to arrange.

The point where the investor engages designers, consultants and a construction company depends on the expertise of the investor, on the project characteristics and the source of the project. Many investors have outsourced renting and technical management, and with them, smaller repairs. Both case company representatives and the investors agree that in cases of most usual renovations, the construction company is often selected through a bidding competition. At this point, the other partners have already been selected, such as an architect, a possible external project manager, structural engineer and building services engineer, and the frames for the project are ready. According to the case company interviews, when bidded projects reach the construction company, they already are in a hurry.

Projects that are more complex or of a type that the investor has less experience on, such as alterations of use, a partnership with the constructor is more valued and included in the

project at an earlier stage. In addition, some projects might be suggested by the constructor in the first place, where future the collaboration is natural. The constructor representatives find that relevant information for the investor at that point are the price level of the area, the possible future value of the real estate, the cost estimation, and how they fit the profitability calculations. The interviewees mention that aid for the decisions is available, but the investors must evaluate them critically. For example, market data of the rental levels are an aid, but the property specific features must be taken into account, and exterior consultants can decrease the investor's workload, but it is not smart to exploit their work without revising them thoroughly.

The initial cost estimations that construction companies give are often found to be higher than the investor expects. Therefore, the process leads to an evaluation of potential saving points and defining essential items to keep in the plans to maintain quality requirements. Many of the investor interviewees mentioned that the prices must be at the market level, even in collaboration projects. They might evaluate prices based on their own experiences or even revise the price by bidding competitions before implementation, which might lead the construction company to lose the project.

According to the case company representatives, the quality definitions differ between investors. The interviewed investors recognised three quality types: technical, operational and users' quality. Some of them emphasised that users are the lifeline for the business and they seemed to focus on that aspect the most. In addition to taking the users' opinions into account when planning the development, they consider their solvency and proportion the improvements according to it. High-quality premises do not have any value if there is no one to pay for them. Technical and operational quality assurance seems to base more on the selection of partners.

The interviews found that in developing, investors find it essential to focus on the most critical issues. Renovating everything is rarely profitable, and thus in the project planning phase, the scope of the development is defined. The property must fit its demand, and in this, they find proper planning critical, which is ensured with design manuals and commenting on the plans. Especially in non-residential properties, user involvement and preleasing are also important measures to decrease risk and ensure their profitability. Renting more specialised properties is difficult, and thus the investors are not willing to invest in it unless they have a long enough lease agreement. According to one of the investors, the residential markets currently have high enough demand to make also worse solutions profitable.

For the development decisions, investors use their own guidelines and give their partners design manuals to communicate their needs. These manuals also reflect the values the investors want to promote. Some mentioned themes that the investors want to promote are responsible choices, durability and timelessness of surface materials, recycling, maintainability of the building services and improving quality where it adds value. Their perception of sustainable choices is that currently, they do not add value in the residential markets. Therefore, promoting sustainability is focused on cost neutral options and those that decrease operational costs, such as energy efficiency and durable materials.

## Comparison to the literature

The development process description formed according to the interviews seems to fit the frames of Table 1, where events-sequence models of real estate development projects were compiled. The trigger for development starts the basic knowledge collation, where the market and problems of property are analysed. According to Murtomaa (1996, p. 398), the need for development occurs when the building can no longer meet the requirements of its use. The example triggers of maintenance backlog and low rental level given in the interviews represent financial perspective; the property does not meet its requirements if its investor cannot meet its financial objectives. Ahola (2006, p. 5-6) states that the goals of the phase are to map the state of the property and create a target state in which the property should be in after the development.

The interviews confirmed the different timespans of investors. As institutional investors look for less risky development objects (KTI, 2018b) and have considerable cash reserves to be invested (BusinessDictionary, n.d.), it is logical that they appreciate economical life cycle costs. Whereas the more varying strategies observed on the private investors fits Reed and Sims's (2014, p. 19) statement that they formulate their development strategies in accordance with the interest and expertise of their directors, their perception of the prevailing and future market conditions, as well as following the strategic direction they desire their organisation to pursue when looking forward.

Next is the project planning phase, including alternatives analysis where the project frames are undergone with the constructor. The interviews found out that the partnership with a constructor is more valued if they can offer expertise on issues that the investor lacks. A mentioned typical example of this is an alteration of use of a property, which seems to have demand, as chapter 2.1 indicates.

In order to succeed, the constructor needs to know how their customers define quality. According to the interviews, investors' quality definitions differ, but types of technical, operational and user's quality were found. Chapter 3.2.3 presented Kano-model of quality, which reveals that in addition to the recognised quality features, there are also the quality features the customers know they want only after they experience them (Löfgren and Witell, 2008). In addition, Figure 8 presented quality gaps that are possible points in the production chain where insufficient information or communication leads to poor experienced quality (Fischgrund and Omachonu, 2014).

The finding that the users are the lifeline for the investors' business has been detected in the literature repeatedly. For example, as stated in chapter 2.2.1, the user market is what determines rental levels, which together with capital values forms the value of development (Morley, 2002, p. 76.), or in chapter 2.2.4, it is vital for the investor to be able to predict the expectations of the future residents to be able to invest wisely (Vainio et al., 1998), referring to the user markets. However, the interviews indicated that there is less pressure to develop residential solutions and that user involvement is not considerable in residential development projects. Residential markets are overall considered less risky (KTI, 2018b).

Finally, as presented in Table 1, the plans are finalised in the design phase and constructed in the implementation phase. As the interviews focused on the early phases of collaboration, they had little discussion about the phases after design and implementation.



### 4.2.3 Collaboration

#### Interview results

As indicated, the selection of partners is dependent on the expertise of each party. In addition, the size of the project is reflected with the considered construction companies to ensure sufficient resources but avoiding too heavy cost structures. None of the interviewed investors is a public actor, and therefore they do not have to meet competition legislation statutes and do not have to arrange open bidding competitions. Instead, they tend to select companies they have collaborated with before and experienced that can offer competence and quality, or they believe to have a special skill set that competitors do not. The invitations for bid are preferably sent to a few trusted companies than to several unknown ones, and the price is determined in the bidding.

The significance of trust arose repeatedly in the interviews. Naturally, no one wants to collaborate with parties they do not trust, and thus it is one of the essential factors when partners are selected. If investors want to try new partners, they are preferably tried on low-risk projects. Collaboration is often also smoother when the partners know each other and their objectives. Communicating the possible partners' interests in the developed project and resource situation can also be beneficial; the collaboration is done in mutual interest and with high motivation.

According to both case company and investor interviewees, trust is built with successful mutual projects. A successful project has good technical quality and is finished in time, but even these can be forgiven if the communication between the team and the investor is functioning and open. However, trust is easily lost, and after that partnerships are more difficult to build. For example, construction companies that seem to focus more on charging additional works than to bid for the whole scope from the beginning give a bad impression for their customers. Case company representatives indicate that with investors that have earlier had bad experiences take longer to build trust. On the other hand, in the end, they might appreciate companionships even more as they only begin to trust the ones they have had successful projects with.

Trust is often related to the persons and teams rather than the companies they represent. The trusted fluency is believed to be in the particular teams that have the people the investors are used to working with. The construction site management team is the one doing most of the communicating with the investors in the implementation phase, and some of the interviewees believe that they play a key role also in creating a thriving work atmosphere. The company's role is to provide the settings and resources for the team to succeed, as well as the company enterprise culture according to which the team works.

For construction companies, design manuals are often the first indication of investor's needs and values. The biggest actors in the real estate investment business have earlier collaborated with most of the possible partners and reached a level of mutual understanding. Therefore, they experience that their needs are well communicated, and the following discussions can focus on necessary specifications. When there has been no earlier collaboration or the design manuals are not as developed, there is a bigger risk of having problems in mutual understanding. As development projects are complex entities, all of the development

requests are difficult to be met. Therefore, after the communication of the needs, the parties start discussing alternatives and forming the most rational option.

Because some actors require more expertise from their partners, they also often emphasise the collaboration more. They see that they should not pretend to know more than they do and find collaborating with experts of different fields very beneficial. They also advocate planning together to avoid confusion and debates in the implementation phase. In turn, investors that have a long history in property development, take a more leading role in the development, know what they want and challenge their partners to come up with better solutions. This attitude applies to project delivery methods. The investors who have much experience and thus are confident about the development projects, also have a predefined project delivery method, such as construction management at risk.

Overall, expectations for construction companies in the project planning phase are to offer cost estimations and risk evaluations, as well as suggestions for better technical solutions. The investors do not find constructor's outlooks on market risks valuable but wish construction companies to be willing to work solutions-based and to understand investors' goals and to help in achieving them. They concern themselves about the constructors' abilities to be in control of their project when there are several simultaneous ongoing projects. Both investor and case company interviewees wish more openness, taking an interest in also the perspective of the other party, open communication and not holding back any information.

Most of the interviewees agree that flexibility is part of partnership and enhances trust. They also agree that contracts for the collaboration must be in order to form the base for the business. According to the investor interviews, the contracts are made with lawyers, but they wish for flexible and persevering attitudes in collaboration. One of the investors emphasised openness also in financial terms. The promoted idea was to understand and accept that the projects need to be profitable for each party and to make them also visible in the contract. The ideology is in open cost information and alliance-type of contracts where all parties benefit from a successful project, and similarly, risks are divided as well.

In the collaboration projects where the case company has a lot of background work to do, they would prefer to sign a collaboration contract because even if they invest a lot of time to a certain project, the investor might end up choosing another contractor. Currently, there are enough competitors in the markets who are willing to do background work without a contract, which weakens the case company's bargaining power. According to the case company, the investors validate choosing a competitor by checking the price but might end up paying more if the bids are not comparable. Indeed, some investors found comparing bids difficult as the assumptions may vary and mentioned incomplete background information to be a risk that could lead to expensive deviations.

The case company's perspective on the implementation contracts is that they need to have enough details in order to avoid confusion and ensure a smooth process at the construction site. They also recognised that sometimes it would be more beneficial to be flexible and, for example, take care of small repairs that would not otherwise belong to the constructor to maintain the good spirit and facilitate future collaboration.

## **Comparison to the literature**

As chapter 3.3.3 indicated, networks are always present in businesses. Controlling their networks and forming embedded relationships, companies can achieve competitive advantages (Pekkanen, 2005). Forming embedded ties requires trust, fine-grained information transfer and joint problem-solving arrangements, and they require a personal touch and mutually developed working methods (Klemetti, 2006). Pekkanen (2005) also stated that trust between professionals has been found to be one of the most significant success factors in intercompany relationships. Therefore, the fact that trust was a repetitive theme in the interviews is not surprising.

Collaboration between construction organisations is the basis of construction project success (Phua and Rowlinson, 2004) and the interviewees seem to agree, as they discussed more about who the collaboration should be with and in what extent they expect to collaborate with other professionals and not about whether to collaborate at all. As also Cadman and Topping (1995, p. 200) said, the decision on the contract form depends on customer's requirements and the size and complexity of the development. Collaboration partners are required to be trustworthy. The interviewees think that trust is built with successful mutual projects that have good technical quality and are finished in time. In other words, the investors expect the construction companies to fulfil their role in the collaboration, as the goal of construction contracting is to produce a good quality building on time and within budget (Cadman and Topping, 1995, p. 236).

There seemed to be quite a clear consensus of the distribution of work between the investor and the constructor in risk analysis. They do exploit collaboration to communicate risks, which according to Klemetti (2006) helps to understand the full range of risk comprehensively. As Breuer and Nadler (2012, pp. 11-12) stated, real estate is inflexible to changes in market demand, and it has multiple factors influencing the property value, which makes it a risky investment. Therefore, a careful risk analysis is vital for a development project. In the constructors' point of view, Rounds and Segner (2011, p. 7) discovered that successful contractors are those who learn methods to recognise, mitigate, and deal effectively with the numerous risks that the work in the industry entails. Thus, their expertise needs to cover both the technical risks of the solutions and the risks related to their business.

## **4.2.4 Business Development Possibilities**

### **Interview results**

Some of the interviewees presented some improvement ideas on their own initiative, but they were also asked to give them at the end of the interviews. The case company felt that there is a need to improve the continuity of their current business. As they have both collaboration projects and those that source from bidding competitions, filling the future timeline evenly with projects is sometimes challenging. One of them felt that their current strategy of not participating themselves in the financial investments of their projects slows their business down and increases the risk of wasting their time for investigating less certain projects.

According to the case company representatives, some of the investors wish for an initial cost estimate very soon for a conversation tool. The company's core business in repair construction makes it difficult to create models that could reliably be used in different kind of projects, and too rough cost estimates do not add value. However, they do feel that there is always room for improving their speed of giving cost estimates and making the bidding process more efficient.

The business development possibilities given by the interviewed investors can be divided into two categories. The first one is about the implementation and thus not directly linked to the alternatives analysis phase. In implementation, they wish that damp security would improve and that workers' would have more professional pride and their attitudes would get more ambitious. They also encourage productivity increase by improving the internal logistics of construction sites and by productisation.

The other category is related to communication. As also the earlier sections revealed, the parties wish for more openness to new ideas and not holding back any essential information. There is a need to improve communication about their own needs to the partners but also to take an interest in the other's perspective. More constructive feedback between companies related to common projects would also be welcome. One concrete example of improving communication was to improve communication of the products quality categorisations.

### **Comparison to the literature**

As already was described at the general overview of a development process in chapter 2.2.1, there are several stakeholders involved in the development projects, and each of them has their own expectations and requirements (Kiiras and Tammilehto, 2014, pp. 24-25). The quality gaps of Fischgrund and Omachonu (2014) demonstrate possible problem points in the quality experience, which indicate the need for better communication as well. Pekkanen (2005) listed some of the tasks in a construction project that are often left without definition, such as the attributes and quality of the construction.

The goal of alternatives analysis, as stated in chapter 2.4, is to find out how to proceed with the collaboration to meet the needs and requirements of both parties and to clarify the risk and return targets as well as other expectations. The interviews pointed out that communication should be improved, but this does not come without a cost. There are costs and efforts the parties must conduct in order to reduce information asymmetry, similar what in agency theory is called agency costs (Schieg, 2008). They might be a necessary trade-off, however, to succeed in the projects.

## **4.3 Research Quality**

This chapter observes the research quality of the interviews. These findings are connected to the overall research quality discussed in chapter 5.2. In qualitative research, the traditional concepts of validity and reliability are not directly adaptable measures to define the research quality, because they base on the idea that the researcher could achieve objective truth. An interview is a method where people provide the information source, and their perspectives

naturally change and develop as their experiences grow. Therefore, research quality in case of interview research should be analysed by observing the quality of the used data and how it is analysed. (Hirsjärvi and Hurme, 2001, pp 184-190.)

There are various opinions on which research ethical instructions and interview ideologies should be followed. This research has followed confidentiality, which means that the interviewer has told the interviewees truthfully the purpose of the interview, stored the given data carefully and with confidentiality and protected the interviewees' anonymity in the report (Ruusuvuori and Tiittula, 2005). Because the interviewees represent a particular perspective, the names and represented companies are released to address their expertise. However, the contents of the interviews are not connected to the interviewees, and the original recordings and transcriptions are destroyed after the interviews because that might lead to more open discussion in the interviews.

Although neutrality of the interviewer is a good ambition not to affect the results too much (Ruusuvuori and Tiittula, 2005), the researcher decided to stress the naturality of the interviews to make the environment fruitful for open discussion and speculation, which did reduce the neutrality aspect partially. The naturality of the conversations based on starting the interviews with casual small talk and encouraging the interviewees to tell more by giving small comments in the discussions. In addition, as Ruusuvuori and Tiittula (2005) state, the framing of questions is always dependent on the situation.

As said in chapter 4.1.4, the researcher is a novice interviewer and went through a learning curve as the interviews progressed. When transcribing the interviews, the researcher made some notions that were inspected by listening to the recordings again. The findings are described in the following. In the first interviews, the researcher was slightly insecure and tended to fill the silence too soon with defined questions while the interviewee was still thinking about an angle of approach to the original question. As the interviewing method was more dialogic than strict and closed one, sometimes phrasing turned out to be more enquiring observations than interrogative clauses, which a few times failed to get comments from the interviewees. Overall, the researcher could have given more space for flowing ideas and elaborations. These did get somewhat better as the interviews proceeded, but they should be taken into account when considering the quality and applicability of the research.

Although the majority of the questions proceeded from the more general ones to detailed ones, there were some experiences that the interviewees immersed themselves into details which affected the following answers. A few times some of the interviewees did not answer the asked question but talked beside the point. In addition, at times, they tended to discuss more the implementation when the targeted focus point was at the beginning of the collaboration. These did affect the course of the discussions, but the interview questions did get covered at least on some extent in every interview, and overall, there were no major problems.

In data collection, interview guides, that were created as described in chapter 4.1.3, were used. Because of the researcher's novelty in interviewing, additional questions were also formed to help in situations where the conversation would get stuck. However, not all situations can be prepared for, and even more questions could have gotten to use in some of the interviews. The quality of the interview recordings is satisfactory, and their transcription

was done after the interviews as soon as possible to avoid any information losses. The coding of the data is done consistently to all of the transcriptions as explained in chapter 4.1.4.

Writing the results based on the interpretation of the author. Because the sampling is quite small, any generalisations must be made very carefully. Therefore, the interpretation of the results is quite general, pointing out only the clearest generalisations that can be made between different interviewee groups. Interviews represent the time they were held. Some of the positions and the represented companies might have had changes since. Relative to this research that does not weaken the validity, as the main focus of the interviews is on the experiences of the interviewees rather than their roles or the company structures.

As mentioned, validity and reliability are not very fitting concepts to evaluate interviews, and thus, the trustworthiness of them are confirmed with triangulation. In triangulation, the results that are gained with one method, in this case the interviews, are compared to other sources (Hirsjärvi and Hurme, 2000, p. 189). In this research, triangulation is done by comparing the results to literature at the theme by theme.

## 5 Discussion and Conclusions

This chapter presents the key findings of the research and discusses them. The research quality is evaluated, and finally, topics for future research are proposed.

### 5.1 Key Findings of the Research

The aim of this thesis was to describe the collaboration between an investor and a construction company in the alternatives analysis phase of a residential real estate development project and to itemise challenges this collaboration faces. The findings presented here base on the literature review conducted and presented in chapters 2 and 3 and constructor and interviews of a case construction company and investor-developers presented in chapter 4.

In this thesis, the phase where an investor and a constructor first meet to discuss a real estate development project and its objectives is called alternatives analysis. The point of the phase in the development process varies depending on when the investor wants to involve a constructor to the project, or if the project comes from the constructor when the constructor takes an investor to the project. The level of collaboration depends on the ambitions of the parties, their expertise, and attitudes towards risk.

Roughly, it can be said that in cases of complex development projects, the role of collaboration is emphasised. Investors select their partners carefully out of companies they trust and believe to have the necessary expertise and resources to analyse, inspect and construct the property in question. In the alternatives analysis phase they have a chance to consider together the opportunities there are to reach the investors' goals and to exploit both investors' market knowledge and constructors' cost information. Sometimes, investors might check the price by offering competitors to bid for it, which might lead to an exchange of collaboration partners.

Even in less complicated projects the investors choose their partners out of those whom they trust. In those cases, the project development is taken quite far with other designers, and the construction company is brought to its traditional role – to produce a good quality building on time and within budget. The constructor is selected with a bidding competition, and the process proceeds with a hurry from thereon. If the designs or design manuals and conversations with the partners are not sufficient to reveal all the necessary quality requirements, there is a risk of failed projects due to misunderstandings. Therefore, the simpler model is used mainly to projects that both parties are used to making, and the process nearly goes by routine.

Between these two extremes, there are various possible forms of collaboration. There are, however, some features that do not change. In collaboration, mutual understanding is vital, but also challenging to reach. Although the parties recognise that there is a need for better communication of needs, an all-embracing model for communication is still missing. Defining requirements and expectations is a trade-off with time and money. Therefore, trust and openness are key elements in selecting partners, that are always considered whether a project is complex or not.

The main challenges related to the investor-constructor collaboration in the alternatives analysis phase are related to schedule, insecurity, calculations and communication. There are a couple of issues that make schedules challenging. Fast schedules are important for the investors because they want to get a hold on the cash flow that brings returns for their investments. In addition, the longer the development takes, the bigger the chance that markets change and the profitability of the investment changes. On the other hand, it is important to make careful background work and deal with problems before the development proceeds so much that they are difficult to tackle.

Investments always include trade-offs with risk and return. Real estate developments are an example of medium or high-risk investment objects, and they thus include a considerable amount of insecurities. In addition to the insecurities and risks related to development, the investors might be insecure about their projects or their strategy. Therefore, the construction companies that enter into alternatives analysis with an insecure investor are investing their time and resources to uncertain development projects. Because collaboration contracts are not standard in the markets and the investors are willing to check the prices by bidding competitions, the construction companies have few ways to reduce the risk of losing projects.

The challenges related to calculations have to do with understanding the other party's perspectives. In the construction company point of view, it is challenging to know which factors the investors and users appreciate, to be able to focus on improving the right issues. In the investor point of view, the cost estimates are often high, and they want to reach market prices by giving them to bidding competitions. These bids, however, can be difficult to compare with each other, as different actors might have different assumptions. In the end, lower bids might lead to higher total costs of a project.

This leads to the challenges of communication. Defining objectives is a key point in creating quality development projects. There are some tools that the actors have developed to make the phase more fluent, such as design manuals that are a common way for investors to address their wishes. However, they cannot replace conversation between the parties, and their focus is always on presenting their own perspectives. The interviews indicated that although there is a need for better communication of each own needs, the communication is often centred too much on themselves without being interested in understanding the other party's needs. Two-way open communication would be necessary to both the quality of projects and companionship between partners, which could bring competitive advantage.

There is plenty of literature where the real estate development process and its characteristics are described. This research finds novelty in focusing on a very specific point in the process, alternatives analysis, and its challenges. By observing the collaboration between an investor and a constructor in this timespan, this research has brought yet another confirmation that collaboration, especially in the early stages of real estate development, is beneficial for the project success, as well as to the collaborated relationship. It has demonstrated that there is a need for practical means to improve communication, control insecurity and intensify the alternatives analysis phase.



## 5.2 Research Quality

The literature review aimed to give background information required to understand the frameworks of where the observed collaboration occurs. Because the literature of the topics of real estate development and collaboration is broad, reaching a highly systematic review was not possible to conduct. However, the data of the review was mostly based on quality academic articles, and established textbooks and the sections included in the review were selected to make a firm foundation for the research. The selection process was substance oriented, and no parts were left out on the grounds of their fitness to the research.

Because the scope of the research was in Finnish projects, the review included several Finnish resources to reach national context but did include a substantial amount of international resources not to narrow perspectives down. Additionally, the foundation was broadened with some non-scientific articles and reports, online articles and other web sources to complement other material and to acquire topicality. Similar comparison as the research as of the Finnish construction process to the international real estate investment literature has not been written extensively before.

The data of the empirical approach originated from interviews. The represented interviewee groups were project development professionals of a construction company and developer-investors working in institutional or private investment organisations. The sampling thus represented different perspectives of a real estate development process, but the interviewee groups were small, preventing from making significant generalisations reliably.

The interviews followed confidentiality, and the researcher emphasised natural discussions over neutrality to discover findings also outside the interview guides. The novelty of the researcher as an interviewer had a slight negative effect on the fluency of the interviews, but it got better as the interviews proceeded. Because validity and reliability are not very fitting concepts to evaluate interviews, the trustworthiness of them was confirmed with triangulation by comparing the interviews to literature. The quality of the interviews is discussed in more detail in chapter 4.3.

The thesis has found answers to the research questions; however, they only tell the partial truth. As there is plenty of variation in the real estate development projects, can also this research present some of the main characteristics and challenges the alternatives analysis phase has. The list is not inclusive, and some of the characteristics found fundamental amongst the interviewees, might not be critical in collaboration between other actors. The found challenges are significant, as they are present in the markets even if only a fraction of the actors find them problematic. In addition, some of the interviewees are significant actors in the Finnish real estate development business, and therefore, their perspectives are noteworthy on the national scale.

## 5.3 Conclusions and Suggestions for Further Research

While the thesis has observed collaboration in a precisely defined phase of the real estate development process, are there various exterior factors affecting it. The literature review has introduced the diversity of the real estate business, and in addition, there are various other factors affecting the projects and the collaboration with it. For example, the expertise of the

consultants and designers affect the investor's need to acquire this know-how from the constructor in the project development phase. Naturally, also the demand for residential buildings affects the level of collaboration. The current high demand in the growth areas decreases the risk of vacancy, which demotivates the developers in improving their business.

All in all, the findings of the thesis indicate that there are buyer's markets in project development. Although a customer-oriented perspective is reasonable, did the discussion in the interviews focus especially in the needs of the investor. In addition, they seem to have more bargaining power. While the constructors are looking for ways to confirm their role in project development to get more comprehensive contracts and to benefit from the knowledge gained in the project development phase, the investors can afford to choose contractors from ones they have trust on. Furthermore, they keep the possibility to check the price with bidding competitions until the implementation contract is signed.

The existing literature has quite extensively observed the real estate development process and its characteristics, as well as collaboration as a separate subject. This research has combined these two and focused on the alternatives analysis, i.e. the phase where an investor and a constructor first meet to discuss a real estate development project and its objectives. The research has found challenging points in this collaboration, but it cannot provide a comprehensive list of them or guarantee their applicability in other collaborations or internationally. These would be interesting topics for further research.

The need for better communication has been emphasised in the literature and also in this research repeatedly. However, as stated in chapter 2.1, incomplete information is one of the special features the real estate markets have. Although all of the collaborating parties know the perfect information is impossible to have, they take the lack of it as a challenge. Of course, as mentioned, a successful collaboration can bring competitive advantage, and there are always possibilities to improve in communication. Then again, the information has its cost, which partially explains the current state which seems to be an insufficient amount of communication.

By observing the collaboration between an investor and a constructor in this timespan, this research has brought yet another confirmation that collaboration, especially in the early stages of real estate development, is beneficial for the project success, as well as to the collaborated relationship. Another interesting topic for future research would be to study the measures with which the studied challenges could be tackled and the efficiency of such measures.

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## **List of Appendices**

Appendix 1. List of Interviewees. 1 page.

Appendix 2. Interview Guide. 1 page.

## Appendix 1. List of Interviewees

Type	Name	Title	Company	Date
Construction company	Antti Ratilainen	Hankekehityspäällikkö <i>Project Development Manager</i>	Consti Julkisivut Oy	22.11.2018
	Mari Mäkelä	Hankekehityspäällikkö <i>Project Development Manager</i>	Consti Julkisivut Oy	23.11.2018
Institutional investor	Jukka Teerimäki	Kiinteistöpäällikkö	Sampo Oyj	26.11.2018
	Niina Rajakoski	Rakennuttajapäällikkö <i>Construction Manager</i>	Keskinäinen Eläke- vakuutusyhtiö Ilmarinen	27.11.2018
Private property company	Kim Jolkkonen	Kiinteistökehitysjohtaja <i>Real Estate Development Director</i>	Kojamo Oyj	3.12.2018
	Samuel Tuomola	<i>Chief Operating Officer</i>	Premico Group Oy, representing Premico Consulting Oy	7.1.2019

## Appendix 2. Interview Guide

### Perustiedot

- yritys
- haastateltavan nimi, titteli

### Sijoittajan taustatiedot (tai kokemukset niistä)

- tyyppi
- koko / resurssit
- hankekehitysprosessi
- projektityypit ja sijoitusstrategia
  - kiinteistötyyppi, koko, sijainnit
  - riski-tuotto
  - tavoitteet, määritelmät
  - aktiivisuus

### Rakennusliikkeen taustatiedot (tai kokemukset niistä)

- koko / resurssit
- hankekehitysprosessi
- projektityypit ja toimintastrategia
  - kiinteistötyyppi, koko, sijainnit
  - riskinottovalmius
  - tavoitteet, määritelmät
  - aktiivisuus

### Yhteistyön kokemus

- kerro yhteistyöstä, onnistumisista ja haasteista
- tarpeiden tunnistaminen
- toimintaverkosto, roolit
  - konsultit, muut?
- kumppanien valinta
- toiveet kumppaneille
- sujuvuuden varmistaminen
  - esim. luottamus, sopimukset
- mitä voitaisiin tehdä toisin yhteistyön ja hankkeiden onnistumisen parantamiseksi

### Basics

- company
- interviewee's name, title

### Investor backgrounds (or experiences on them)

- type
- size / resources
- project development process
- projects and investment strategy
  - property types, sizes, locations
  - risk-return
  - goals, their definition
  - activity

### Construction company backgrounds (or experiences on them)

- size / resources
- project development process
- projects and strategy
  - property types, sizes, locations
  - risk-carrying readiness
  - goals, their definition
  - activity

### Experiences on collaboration

- describe collaborations, successes, challenges
- needs identification
- network, roles
  - consultants, others?
- selection of partners
- wishes for partners
- ensuring fluency
  - e.g. trust, contracts
- what could be done differently in the early stages to improve collaboration and project success